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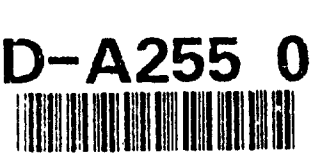

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STRUCTURED ANALYSIS/DESIGN

LSA TASK 301

FUNCTIONAL REQUIREMENTS IDENTIFICATION

SUBTASK 301.2.4.3

OPERATIONS AND OTHER SUPPORT FUNCTIONS

APJ 966-213

APJ

MILITARY & SCIENTIFIC RESEARCH

AMERICAN POWER JET CO. RIDGEFIELD N.J.

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19. ABSTRACT (Continue on reverse if necessary and identify by block number)

This report consolidates the Structured Analysis and Structured Design for the Logistic Support Analysis (LSA) Tasks. Included are the Data Flow Diagrams (DFDs) for the LSA Subtask 301.2.4.3, "Operations and Other Support Functions", with the corresponding descriptions of the processes, data flows, data stores, and external entities identified on each DFD. The DFDs are further developed into procedures which indentifies how to use the data to carry out the processes and accomplish the LSA Subtask. Venture Evaluation Review Technique (VERT) Batch Input files are also provided to assist, as tools, giving both technical and managerial aspects of a task.

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STRUCTURED ANALYSIS\DESIGN

LSA TASK 301

FUNCTIONAL REQUIREMENTS IDENTIFICATION

SUBTASK 301.2.4.3

OPERATIONS AND OTHER SUPPORT FUNCTIONS

under

CONTRACT DAAA21-86-D-0025

for

HQ US AMCCOM
INTEGRATED LOGISTIC SUPPORT OFFICE
AMSMC-LSP
ROCK ISLAND, IL

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AMERICAN POWER JET COMPANY

RIDGEFIELD, NJ — FALLS CHURCH, VA

FT. EUSTIS, VA — ST. LOUIS, MO

January 1991

EXECUTIVE SUMMARY

LSA SUBTASK 301.2.4.3
OPERATIONS AND OTHER SUPPORT FUNCTIONS

The American Power Jet Company (APJ) is under contract to the Army Armament Munitions and Chemical Command (AMCCOM) to provide "how to" procedures for selected ILS and LSA tasks. The results of this effort are a series of Structured System Analysis and Structured System Design reports.

The intent of this work is to be compatible with CALS, LOGPARS, and other similar efforts to enhance performance, training, and automation. Our basic structure facilitates the downstream application of Artificial Intelligence and streamlining of these critical functions.

STRUCTURED SYSTEM ANALYSIS

Excelerator, a Computer Aided Software Engineering (CASE) tool, was used to prepare the Structured System Analysis. Each LSA Task is modeled by a series of Data Flow Diagrams (DFDs), depicting activities and accompanying data flows needed to produce intermediate or final products. Complex activities are "broken down" or "exploded" into lower level data flow diagrams.

Each DFD can contain four types of objects:

- **Processes** or activities
- **Data Flows** - inputs to a process or data output generated from a process
- **Data Stores** - identifies sources for the data
- **External Entities** - indicates who to contact for guidance.

Each object is described either by developing detailed procedures or identifying its data content. The object descriptions are placed in a Data Dictionary which is built-up as the Data Flow Diagrams are expanded, detailed, and eventually completed.

STRUCTURED SYSTEM DESIGN

The Structured Design amplifies the processes and data flows developed in the Structured Analysis into procedures used to accomplish the LSA Tasks and Subtasks. The Analysis provides the method and the Design implements it.

In addition to the narrative portions of the Structured Design, "Input Screens" are developed for each process or set of processes. The charts structure and organize the data needed to perform a LSA task and make decisions on Weapon System supportability. By formalizing the data requirements in this manner a standard set of output reports can be specified.

AUTOMATION

The Structured Design material can of course be used in a manual fashion. However automation of the task achieves several objectives:

The analyst performing the LSA Task, is taken through a series of automated steps leading to a successful result. More time is spent actually doing the work instead of determining what must be done next. Help is available at every step to guide the analyst through the task.

The information is organized so that productivity improves because more time is spent gathering, analyzing, and interpreting the data instead of tedious record keeping.

All data is structured and stored by the software so it can be easily retrieved, edited, and added to.

Output reports are standardized through a report generation facility using preprogrammed report formats. Efficiency improves since the analyst is relieved of the burden of writing and formatting reports. Decision makers receive reports in familiar formats so the most significant sections can be quickly found.

A large volume of data will be captured and stored over a period of time, creating a large "knowledge base". This knowledge base, provides a body of procedures, sources, data, and lessons learned for an analyst to query and apply against a new or an update analysis effort. This available information forms the of basis an Artificial Intelligence (AI) expert system.

Automation of selected LSA subtasks are being prototyped to demonstrate the principles involved and gain user experience. Although fully general, all prototypes are designed for ready development and adaptation to specific weapon systems.

LSA Subtask 301.2.4.3 Description

To place this LSA subtask in context, it is one of nine subtasks of LSA Task 301, "Functional Requirements Identification", which deal with identifying operation and maintenance tasks that are not related to equipment failures. Input for this subtask comes from Subtasks 301.2.1, 301.2.2, and 301.2.3.

This subtask (301.2.4.3) addresses all the functions and tasks not covered by the Failure Modes, Effects and Criticality Analysis (FMECA) and the Reliability Centered Maintenance (RCM) processes (i.e., non-failure related functions and tasks). The system/equipment under development, as well as all the proposed support concepts must be covered. Such tasks fall within the following five areas:

1. Mission/Operations Tasks
2. Training Functions
3. Supply Tasks
4. Support Tasks
5. Control Tasks.

The results of this task feeds LSA Tasks 302, 303, and 401. In most cases, the final results are documented in the LSAR.

FOREWORD

APJ, under contract to HQs, AMCCOM, has initiated the automation of the LSA Tasks (MIL-STD-1388-1) and the assessment of the ILS elements (AR 700-127). A major goal is to unify military and contractor approach to the performance of ILS and LSA.

Detailed to meet all requirements of ILS and LSA, the automated process will continue to provide the flexibility in selecting tasks and elements to be addressed at each life cycle stage. A major advantage of this approach is to insure that the application of each task element is consistent with prescribed Army policies and procedures.

This report consolidates the Structured Analysis and Structured Design under one cover for the respective LSA Task. Structured Analysis provides a logical model of the method to perform an LSA Task. This logical model facilitates the development of a Structured Design that provides the detailed procedures to perform the analysis. Both the logical model and detailed procedures are used to develop the application software programs which will be provided to Government and contractor personnel to assist in the performance of the LSA Task.

Included in this report are the Data Flow Diagrams (DFDs) for LSA Subtask 301.2.4.3, "Operations and Other Support Functions" and the corresponding descriptions of the processes, data flows, data stores, and external entities identified on each DFD (Annex B). In addition, the DFDs are further developed into step-by-step procedures (Annex C) which identify how to use the data to carry out the processes which ultimately lead to accomplishing the LSA Subtask.

To assist managers in planning and controlling this task, Venture Evaluation Review Technique (VERT) Batch Input files are provided (Annex D). These VERT tools provide government agencies with complete packages to give contractors that cover both technical and managerial aspects of a task. This approach establishes a standardized form of communication and management between contractors performing the task and government personnel reviewing the task.

To view this work in context, this report also presents a brief overview of Structured Analysis and its place in the overall systems development process. Additionally, Annex E provides a brief working description of Structured Systems Analysis fundamentals. The overview and certain portions of the introductory text are repeated verbatim in every report in this series so that each report is free standing.

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INTRODUCTION

PURPOSE

The purpose of this report series is to present the results of the APJ Structured Analysis/Design under Contract DAAA21-86-D-0025 for coordination with the AMCCOM Program Manager prior to in-depth programming of ILS and LSA functions and processes. LSA Task 301 "Functional Requirements Identification", (LSA SUBTASK 301.2.4.3 "Operations and Other Support Functions") is addressed in this report.

BACKGROUND

The Department of the Army has a requirement for management control over contractor and Government agency response to the requirements of AR 700-127, "Integrated Logistic Support", and MIL-STD-1388-1, "Logistic Support Analysis". HQs AMCCOM has initiated action to structure each of the LSA tasks, the assessment of each ILS element, the form of the results, and the detailed processes to insure consistency with current Army policies, procedures, and techniques.

This approach (undertaken by AMCCOM and APJ) will insure uniformity in efforts and products, reproducibility of analyses, and a well-defined structure which can be coordinated among all participants in the logistic process to arrive at common understanding and procedures.

SCOPE

This report summarizes the results of the Structured Analysis of the identification of LSA Task 301 "Functional Requirements Identification", LSA Subtask 301.2.4.3, "Operations and Other Support Functions", and presents the associated Data Flow Diagrams (DFDs) developed from the Structured Analysis and the corresponding procedures developed in the Structured Design. The portions of the Data Dictionary relating to the DFDs for this LSA Subtask include the labels, names, descriptions, processes, data flows, data stores, and external entities. (The Data Dictionary is a "living document" that evolves through the analysis and design process).

The Data Dictionaries developed for each of the individual LSA Subtasks are integrated together into a Master Data Dictionary. Integration of the individual Data Dictionary involves the combination of similar Data Flows, Data Stores, and External Entities. The resulting Master Data Dictionary may well contain some minor differences from the definitions that appear in this report. All processes, and of course, the content of the Structured Design will remain identical.

The Structured Design portion of this report develops the processes and data flows developed in the DFDs into procedures which are used to accomplish the LSA Tasks. The DFDs provide the method and the Design implements it, by formulating a guide for programmers to write software applications.

This report presents a brief overview of Structured Analysis and its place in the overall systems design process to assist the reader who may not be fully briefed on the symbols and conventions used. It is supported by Annex E, which defines each element in Structured Analysis.

LSA SUBTASK 301.2.4.3 - Description

LSA Subtask 301.2.4.3 concerns the development of Operations and Other Support Functions for a specific equipment or system and all of its major assemblies, subassemblies, and parts.

The major LSA Task 301 concerns the identification of the total operations and support functions that must be performed for each system/equipment alternative under consideration and to relate these functions to the tasks that must be performed in order to operate and maintain the new system/equipment in its intended environment.

LSA subtasks 301.2.4.1 and 301.2.4.2 concerned the identity of those functions and tasks which could be developed from the failure modes, effects and criticality analysis (FMECA) and the reliability centered maintenance (RCM) processes. This subtask (301.2.4.3) must address all remaining functions and their related tasks as concerns the system/equipment (and all alternatives) under development, as well as all proposed support concepts.

For purposes of this analysis, the operation and other support functions address five (5) major categories:

1. Mission/Operations Tasks
   a. Mission related
   b. Training required
   c. Support equipment/tool requirements
   d. Facilities required
2. Training Functions
3. Supply Tasks
4. Support Tasks (not FMECA or RCM related)
   a. Maintenance
   b. Servicing
   c. Other support task

5. Control
   a. Product assurance tasks
   b. Production control tasks

The LSA Task Description with associated task inputs and outputs is extracted from MIL-STD-1388-1A and is included as Annex A.

APPROACH

The APJ approach to Structured Analysis and Structured Design of an LSA Subtask is:

1. Scope the Subtask defined in MIL-STD-1388-1A with the overall task and determine its relationship with other LSA Tasks.

2. Review all pertinent documentation (e.g., ARs, MIL-STDs, etc.) applicable to the specific topic.

3. Prepare the Top Level DFDs in context of the Subtask, and develop lower level DFDs to further quantify any complex process identified in the top level DFD.

4. Complete the Data Dictionary portion of the Analysis by describing all processes, data flows, data stores and external entities.

5. Apply staff experience in logistic support analysis to assure that the topic has been exhaustively addressed.

6. From the completed DFDs, prepare the step-by-step procedures that form the structured design.

7. Review Data Item Description and other applicable material to develop output reports.

8. If required, revise DFDs and Data Dictionary based on preparation of detailed procedures.

9. Validate results in discussions with Army activities and personnel directly involved in the applicable or related LSA tasks.

NOTE: Structured Analysis and preparation of Data Flow Diagrams (DFDs) was further assisted by the application of Structured Analysis software. Licensed by Index Technology Corporation, Excelerator provides for automated tracking of names, labels, descriptions, multiple levels of detail in the data flow diagrams, and industry standards in symbols and diagramming practices.

LSA SUBTASK 301.2.4.3 - OPERATIONS AND OTHER SUPPORT FUNCTIONS

The Data Flow Diagram is a tool that shows the flow of data, (i.e., data flows from sources) and is processed by activities to produce intermediate or final products.

The DFD provides a useful and meaningful partitioning of a system from the viewpoint of identification and separation of all functions, actions, or processes so that each can be introduced, changed, added, or deleted with minimal disruption of the overall program, i.e., it emphasizes the underlying concept of modularity and identifiable transformations of data into actionable products.

A series of five (5) DFDs have been developed to structure the LSA subtask relative to operations and other support functions:

1. 301.2.4.2 Top Level
2. 301.2.4.3.1A Identify Other Support Function
3. 301.2.4.3.2A Develop Mission Operation Functions
4. 301.2.4.3.2A3B Develop Task Code
5. 301.2.4.3.3A Develop Supply/Support Functions

Each DFD is keyed to the specific task through the identification number assigned in the lower right hand box. The Alpha codes indicate the level of indenture or explosion below the top level, i.e.,:

Top Level.....LSA DFD 301.2.4.3
First Indenture.....LSA DFD 301.2.4.3.1A

Each DFD makes reference to the basic LSA task it addresses, as well as the level of indenture (explosion) of the DFD. For example, the first or top level DFD, "301.2.4.3", refers to the section in MIL-STD-1388-1A which describes the review items. One of the processes (bubbles) on the top level diagram (301.2.4.3.1) is expanded and identified as "301.2.4.3.1A", a second level of "301.2.4.3" (Alpha "A" indicates the second level).

Four standard symbols are used in the drawing of a DFD (see Annex E - Figure 1).

A copy of each DFD is presented in Annex B, accompanied by the Data Dictionary process elements. Each entry made in the DFDs has a corresponding entry in the Data Dictionary.

This presents only those Data Dictionary entries necessary for the coordination of the overall concept and details of the processes. To facilitate review of the diagrams, data flow identifications, process, an data store descriptions are provided.

As noted above, they will continue to evolve and be expanded in the System Design phase.

VERT DIAGRAMS

The Venture Evaluation Review Technique (VERT) was developed as a network analysis technique to facilitate management decision making. It allows systematic planning and control of programs and enables managers to find solutions to real life managerial problems. The VERT Diagrams and Input Files for this task can be found in Annex D. In order to understand how these Input Files were developed, a brief discussion of the methodology used is provided. The same explanation is repeated verbatim in every report.

ANNEX A

—

LSA TASK 301
FUNCTIONAL REQUIREMENTS IDENTIFICATION

ANNEX A
LSA TASK 301
FUNCTIONAL REQUIREMENT IDENTIFICATION 1/

301.1 PURPOSE: To identify the operations and support functions that must be performed for each system/equipment alternative under consideration and then identify the tasks new system/equipment in its intended environment.

301.2.4 TASK DESCRIPTION:

301.2.4 Identify the operations and maintenance tasks for the new system/equipment based on the identified functional requirements. Tasks shall be identified to a level commensurate with design and operational scenario development and shall cover all functions which required logistic support resources. Preventive maintenance, corrective maintenance, and operations and other support tasks such as preparation for operation, operation, post operation, calibration, and transportation shall be identified by the following methods:

301.2.4.3.3 Operations and other support tasks not identified by the FMECA or RCM analysis shall be identified through analysis of the functional requirements and intended operation of the new system/equipment. The LSAR or equivalent format approved by the requiring authority shall be used to document these tasks.

301.3 TASK INPUT

301.3.1 Delivery identification of data required.

301.3.2 Detailed RCM procedures and logic to be used in conducting the RCM analysis.

301.3.3 Identification of system/equipment hardware and software on which this task will be performed and the indenture levels to which this analysis will be carried.

301.3.4 Identification of the levels of maintenance which will be analyzed during performance of this task to identify functions and tasks.

301.3.5 Any documentation requirements over and above LSAR data such as functional flow diagrams or design recommendation data resulting from the task identification process.

301.3.6 Requirement for an FMECA in accordance with MIL-STD-1629.

301.3.7 Description of system/equipment concepts under consideration.

1/ Abstracted verbatim from MIL-STD-1388-1A, April 11, 1983, Pages 31-33.

301.3.8 Supportability, cost, and readiness drivers from Task 203.

301.3.9 FMECA results.

301.3.10 Use study results from Task 201.

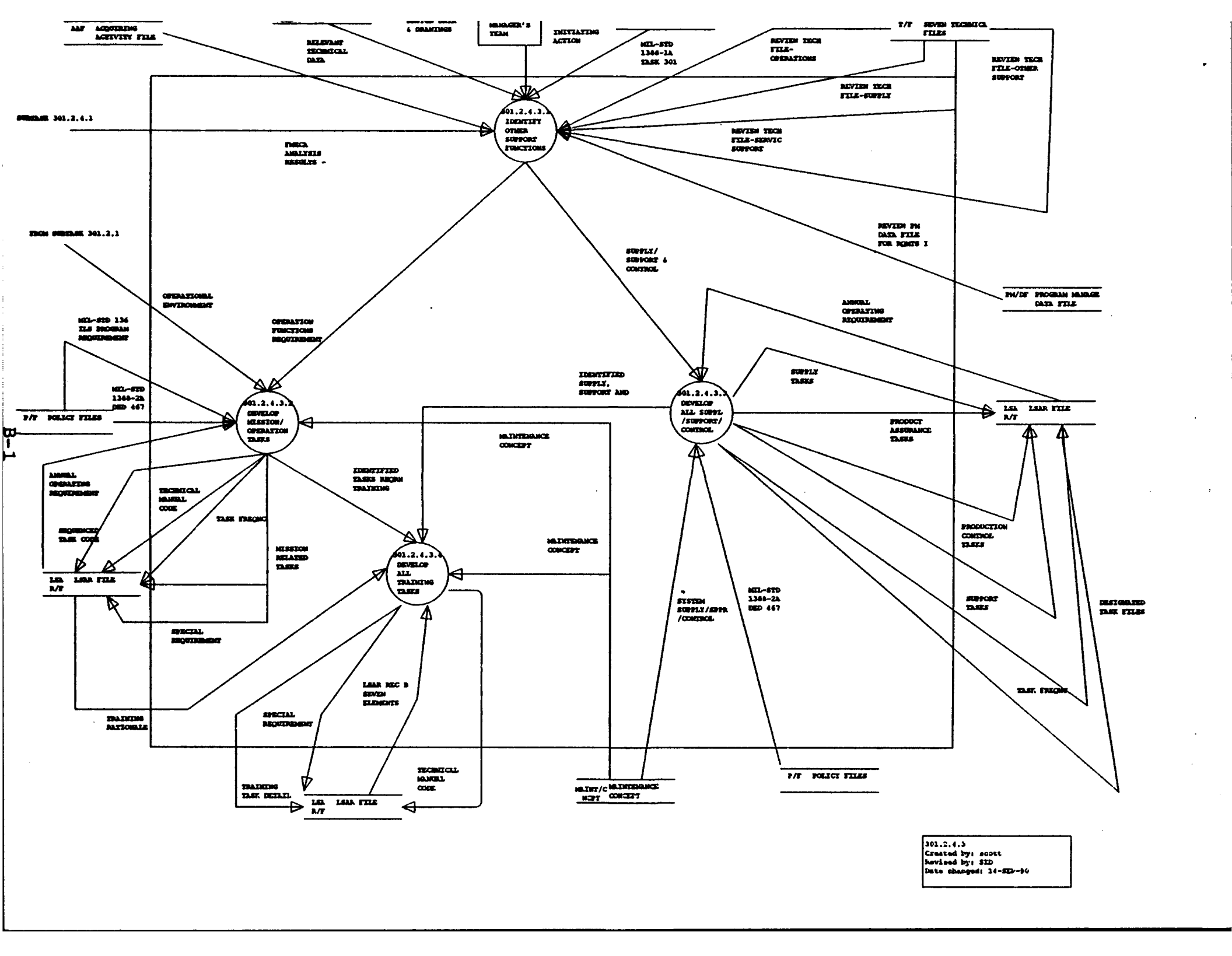
301.4 TASK OUTPUT

301.4.1 Documented functional requirements for new system/ equipment alternatives in both peacetime and wartime environments.

ANNEX B

—

SUBTASK 301.2.4.3
OPERATIONS AND OTHER SUPPORT FUNCTIONS, DATA FLOW DIAGRAMS AND PROCESS DATA DICTIONARY


ASF ACQUIRING ACTIVITY FILE
RELEVANT TECHNICAL DATA
& DRAWINGS
MANAGER'S TEAM
INITIATING ACTION
MIL-STD 1388-1A TASK 301
REVIEW TECH FILE-OPERATIONS
F/F REVIEW TECHNICA FILES
REVIEW TECH FILE-OTHER SUPPORT
REVIEW TECH FILE-SUPPLY
SUBTASK 301.2.4.1
301.2.4.3.1 IDENTIFY OTHER SUPPORT FUNCTIONS
FMECA ANALYSIS RESULTS -
REVIEW TECH FILE-SERVIC SUPPORT
FROM SUBTASK 301.2.1
REVIEW PM DATA FILE FOR RQMTS I
SUPPLY/ SUPPORT & CONTROL
PM/DF PROGRAM MANAGE DATA FILE
OPERATIONAL ENVIRONMENT
ANNUAL OPERATING REQUIREMENT
MIL-STD 136 ILS PROGRAM REQUIREMENT
OPERATION FUNCTIONS REQUIREMENT
IDENTIFIED SUPPLY, SUPPORT AND
SUPPLY TASKS
MIL-STD 1388-2A DED 467
301.2.4.3.2 DEVELOP MISSION/ OPERATION TASKS
301.2.4.3.5 DEVELOP ALL SUPPL /SUPPORT/ CONTROL
LSA LSAR FILE R/T
P/F POLICY FILES
PRODUCT ASSURANCE TASKS
MAINTENANCE CONCEPT
ANNUAL OPERATING REQUIREMENT
TECHNICAL MANUAL CODE
IDENTIFIED TASKS REQRN TRAINING
TASK FREQNC
PRODUCTION CONTROL TASKS
MECHANICS TASK CODE
MISSION RELATED TASKS
MAINTENANCE CONCEPT
301.2.4.3.4 DEVELOP ALL TRAINING TASKS
LSA LSAR FILE R/T
SYSTEM SUPPLY/SUPPR /CONTROL
MIL-STD 1388-2A DED 467
SUPPORT TASKS
DESIGNATED TASK FILES
SPECIAL REQUIREMENT
TASK FREQNC
LSAR REC D SEVEN ELEMENTS
TRAINING RATIONALE
SPECIAL REQUIREMENT
TECHNICAL MANUAL CODE
TRAINING TASK DETAIL
LSA LSAR FILE R/T
MAINT/C NCPT
MAINTENANCE CONCEPT
P/F POLICY FILES
301.2.4.3
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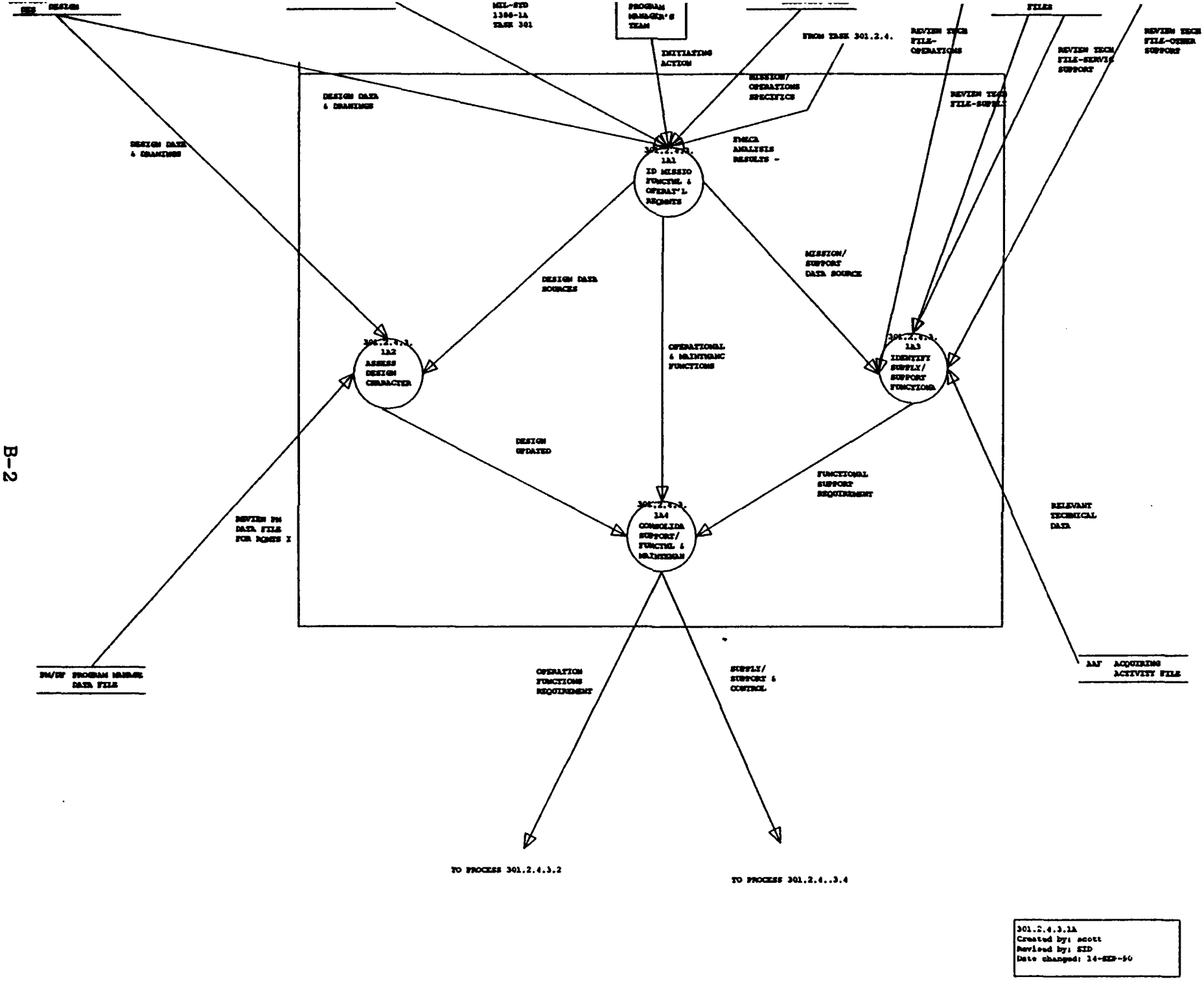
Revised by: SID
Date changed: 14-SEP-90


MIL-STD 1388-1A TASK 301
PROGRAM MANAGER'S TEAM
FROM TASK 301.2.4.
INITIATING ACTION
MISSION/ OPERATIONS SPECIFICS
FILES
REVIEW TECH FILE-OPERATIONS
REVIEW TECH FILE-SERVICE SUPPORT
REVIEW TECH FILE-OTHER SUPPORT
DESIGN DATA & DRAWINGS
TMECA ANALYSIS RESULTS -
301.2.4.3.1. 1A1 ID MISSIO FUNCTNL & OPERAT'L REQMNTS
MISSION/ SUPPORT DATA SOURCE
DESIGN DATA SOURCES
OPERATIONAL & MAINTENANC FUNCTIONS
301.2.4.3. 1A2 ASSESS DESIGN CHARACTER
301.2.4.3. 1A3 IDENTIFY SUPPLY/ SUPPORT FUNCTIONS
DESIGN UPDATED
FUNCTIONAL SUPPORT REQUIREMENT
301.2.4.3. 1A4 CONSOLIDA SUPPORT/ FUNCTNL & MAINTENAN
RELEVANT TECHNICAL DATA
REVIEW PM DATA FILE FOR ROMIS I
PM/DF PROGRAM MANAGE DATA FILE
AAF ACQUIRING ACTIVITY FILE
OPERATION FUNCTIONS REQUIREMENT
SUPPLY/ SUPPORT & CONTROL
TO PROCESS 301.2.4.3.2
TO PROCESS 301.2.4..3.4
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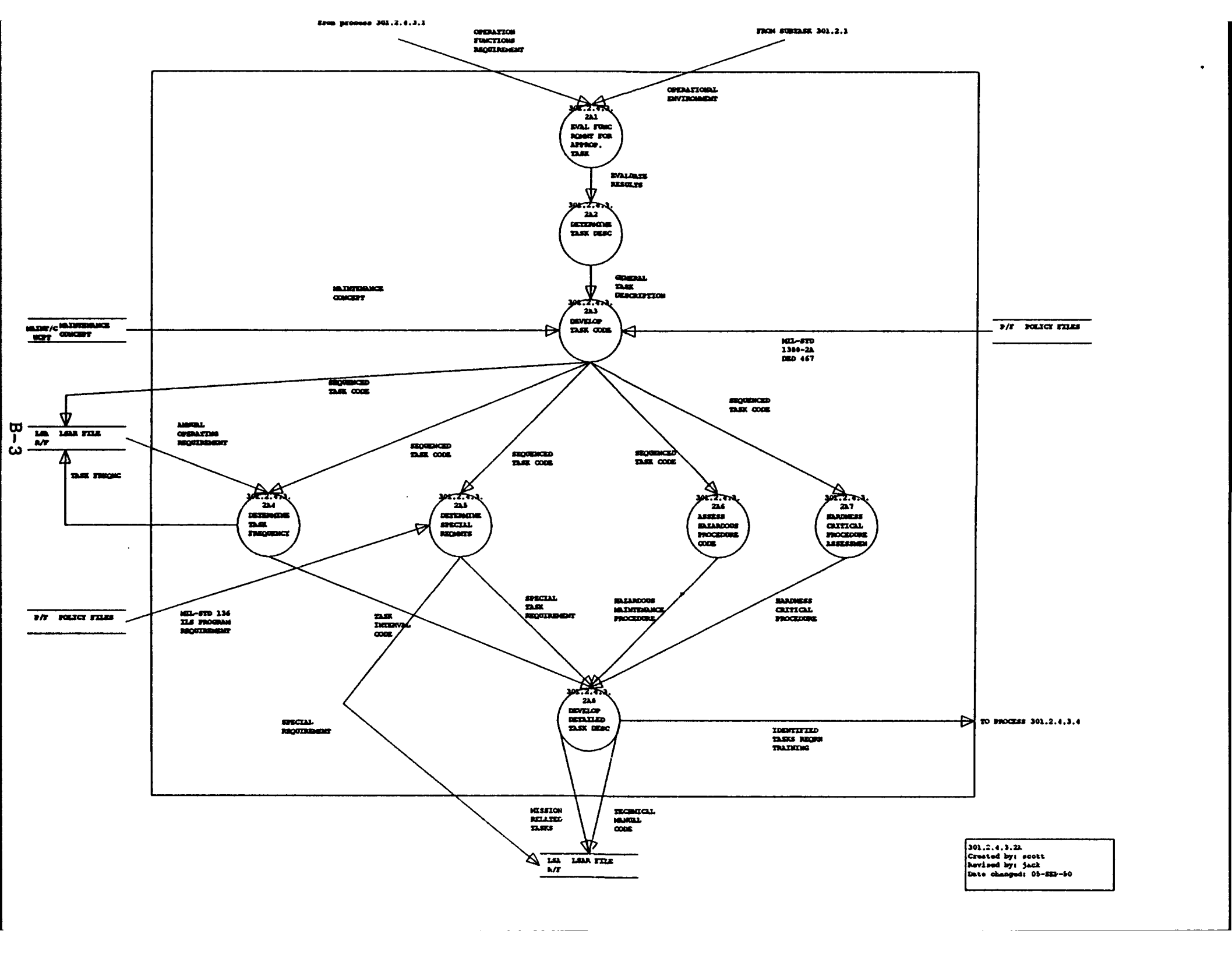
Revised by: SID
Date changed: 14-SEP-90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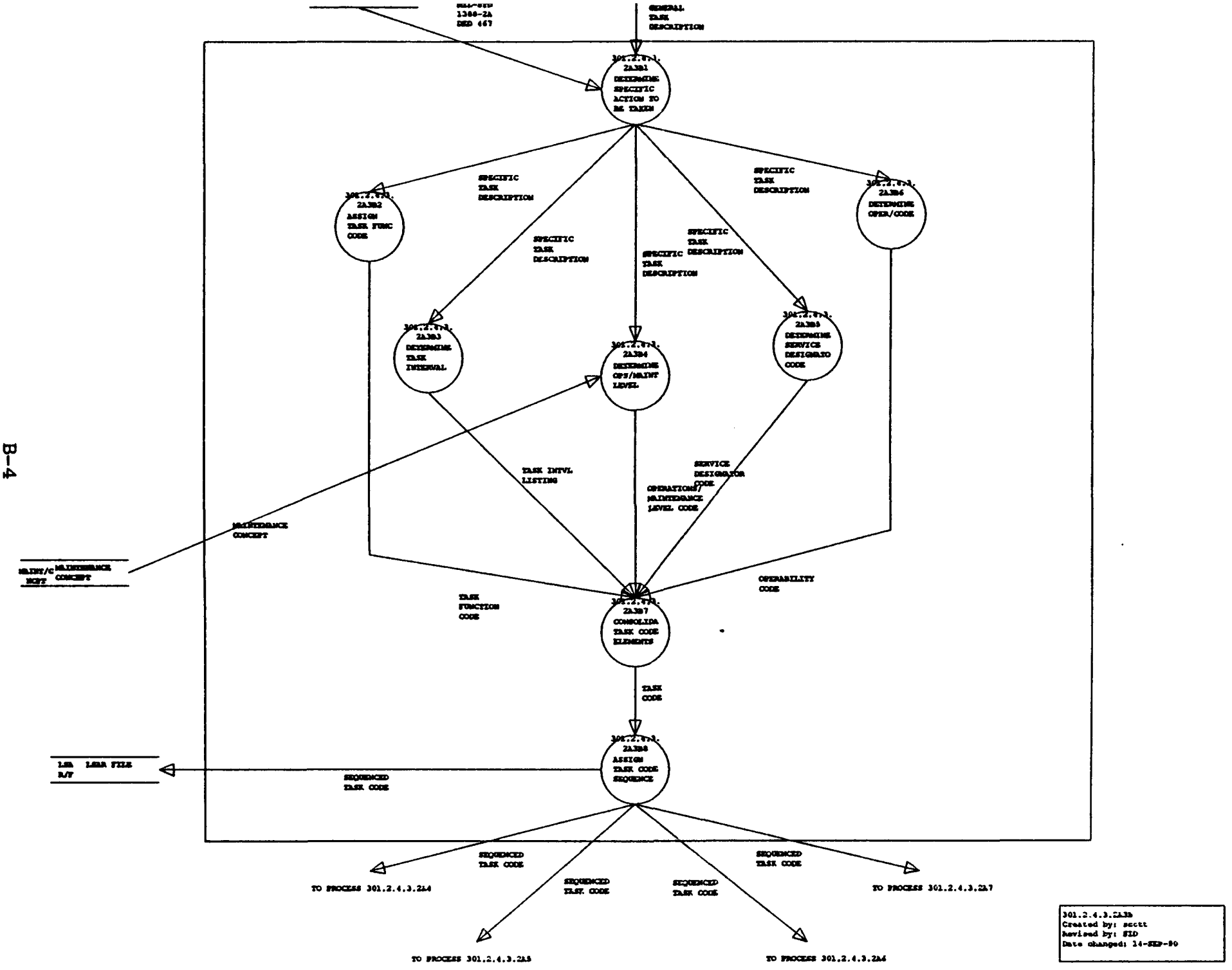
OPERATION FUNCTIONS REQUIREMENT
FROM SUBTASK 301.2.1
OPERATIONAL ENVIRONMENT
301.2.4.3.1 2A1 EVAL FUNC RQMT FOR APPROP. TASK
EVALUATE RESULTS
301.2.4.3.1 2A2 DETERMINE TASK DESC
GENERAL TASK DESCRIPTION
MAINTENANCE CONCEPT
301.2.4.3.1 2A3 DEVELOP TASK CODE
MAINT/C MGMT
MAINTENANCE CONCEPT
D/F POLICY FILES
MIL-STD 1388-2A DED 467
SEQUENCED TASK CODE
SEQUENCED TASK CODE
LSA D/F
LSAR FILE
ANNUAL OPERATING REQUIREMENT
SEQUENCED TASK CODE
SEQUENCED TASK CODE
SEQUENCED TASK CODE
TASK FREQMC
301.2.4.3.1 2A4 DETERMINE TASK FREQUENCY
301.2.4.3.1 2A5 DETERMINE SPECIAL REQMTS
301.2.4.3.1 2A6 ASSESS HAZARDOUS PROCEDURE CODE
301.2.4.3.1 2A7 HARDNESS CRITICAL PROCEDURE ASSESSMEN
D/F POLICY FILES
MIL-STD 136 ILS PROGRAM REQUIREMENT
TASK INTERVAL CODE
SPECIAL TASK REQUIREMENT
HAZARDOUS MAINTENANCE PROCEDURE
HARDNESS CRITICAL PROCEDURE
301.2.4.3.1 2A8 DEVELOP DETAILED TASK DESC
TO PROCESS 301.2.4.3.4
SPECIAL REQUIREMENT
IDENTIFIED TASKS REQRD TRAINING
MISSION RELATED TASKS
TECHNICAL MANUAL CODE
LSA D/F
LSAR FILE
301.2.4.3.2A
Created by: scott
Revised by: jack
Date changed: 05-SEP-90
B-3


GENERAL TASK DESCRIPTION
301.2.4.3. 2A.3B1 DETERMINE SPECIFIC ACTION TO BE TAKEN
SPECIFIC TASK DESCRIPTION
SPECIFIC TASK DESCRIPTION
SPECIFIC TASK DESCRIPTION
SPECIFIC TASK DESCRIPTION
SPECIFIC TASK DESCRIPTION
301.2.4.3. 2A.3B2 ASSIGN TASK FUNC CODE
301.2.4.3. 2A.3B3 DETERMINE TASK INTERVAL
301.2.4.3. 2A.3B4 DETERMINE OPS/MAINT LEVEL
301.2.4.3. 2A.3B5 DETERMINE SERVICE DESIGNATO CODE
301.2.4.3. 2A.3B6 DETERMINE OPER/CODE
TASK INTVL LISTING
SERVICE DESIGNATOR CODE
OPERATIONS/ MAINTENANCE LEVEL CODE
MAINTENANCE CONCEPT
MAINT/C NCPT MAINTENANCE CONCEPT
OPERABILITY CODE
TASK FUNCTION CODE
301.2.4.3. 2A.3B7 CONSOLIDA TASK CODE ELEMENTS
TASK CODE
301.2.4.3. 2A.3B8 ASSIGN TASK CODE SEQUENCE
LSA LSAR FILE S/T
SEQUENCED TASK CODE
SEQUENCED TASK CODE
SEQUENCED TASK CODE
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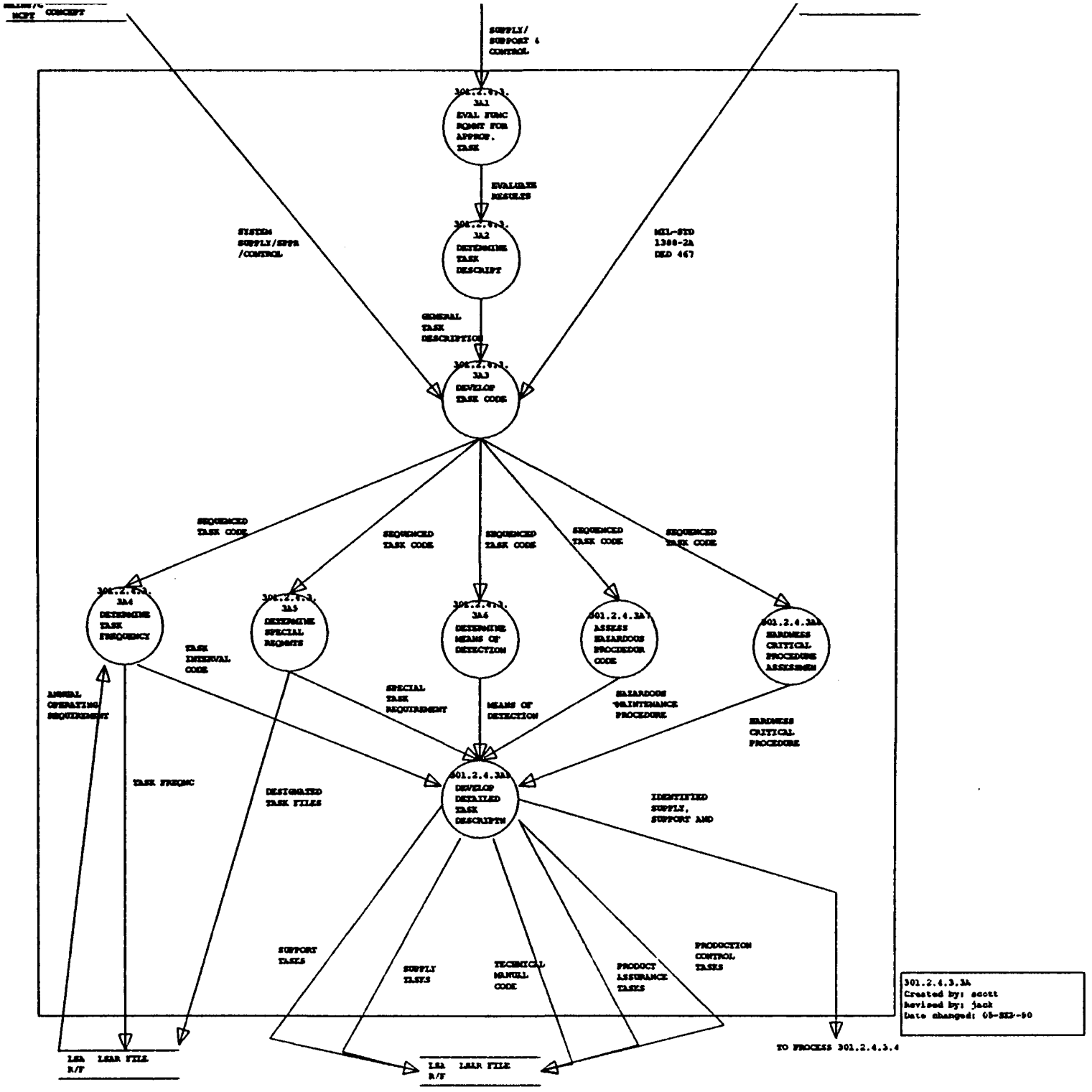
SEQUENCED TASK CODE
TO PROCESS 301.2.4.3.2A4
TO PROCESS 301.2.4.3.2A5
TO PROCESS 301.2.4.3.2A6
TO PROCESS 301.2.4.3.2A7
301.2.4.3.2A3b
Created by: sectt
Revised by: SID
Date changed: 14-SEP-90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LSAR FILE
TO PROCESS 301.2.4.3.4
301.2.4.3.3A
Created by: scott
Revised by: jack
Date changed: 05-SEP-90

Name	Label	Description
301.2.4.3.1	IDENTIFY OTHER SUPPORT FUNCTIONS	ACRONYMS:LSA - LOGISTIC SUPPORT ANALYSIS FMECA - FAILURE MODES, EFFECTS, CRITICALITY ANALYSIS RCM - RELIABILITY-CENTERED MAINTENANCE PURPOSE: IN ORDER TO IDENTIFY THE OPERATIONS, MAINTENANCE, AND SUPPORT TASKS THAT WERE NOT PREVIOUSLY COVERED AND MUST BE ACCOMPLISHED FOR THE SYSTEM/UNIT TO PERFORM ITS INTENDED MISSIONS (LSA TASK 301.2.4) , ALL FUNCTIONAL AND SUPPORT REQUIREMENTS MUST BE IDENTIFIED. THIS ENTAILS THE REVIEW OF PREVIOUS LSA (FMECA, RCM, ETC.), DESIGN DOCUMENTS, MISSION STATEMENT AND PLANNING DOCUMENTS, ETC. ONCE IDENTIFIED, THESE SHOULD BE SORTED BY THE CATEGORY (SUPPLY, SUPPORT OR CONTROL) INTO WHICH THEY FALL. SEE DFD 301.2.4.3.1A FOR DETAILED DESCRIPTION OF PROCESSES TO IDENTIFY ALL OPS AND SUPPORT FUNCTIONAL REQUIREMENTS.
301.2.4.3.1A1	ID MISSION FUNCTNL & OPERAT'L REQMNTS	ACRONYMS: PURPOSE: REVIEW ALL POSSIBLE SOURCES OF DATA FOR FUNCTIONAL AND OPERATIONAL REQUIREMENTS. THE TWO MAJOR TYPES OF DOCUMENTS TO BE CONSIDERED ARE THOSE THAT PROVIDE DESIGN RELATED INFORMATION (DESIGN DRAWINGS, DESIGN SPECIFICATIONS ETC.) AND THOSE THAT PROVIDE TECHNICAL- AND MISSION-ORIENTED INFORMATION (PROGRAM PLANNING DOCUMENTS, NEEDS STATEMENTS, EXISTING DEVELOPMENT MANUALS, ETC.)
301.2.4.3.1A2	ASSESS DESIGN CHARACTER	ACRONYMS: PURPOSE: ONCE IDENTIFIED AS A SOURCE OF DATA, CONSIDER ALL DESIGN-RELATED CHARACTERISTICS IN ORDER TO ASSIST IN THE DEVELOPMENT OF FUNCTIONAL AND SUPPORT REQUIREMENTS. SOURCE OF THIS DESIGN DATA WILL BE DESIGN ENGINEERING AND THE PROGRAM MANAGER DATA FILES.
301.2.4.3.1A3	IDENTIFY SUPPLY/ SUPPORT FUNCTIONAL REQS	ACRONYMS: AAF-ACQUIRING ACTIVITY FILE PURPOSE: REVIEW ALL PERTINENT AAF AND TECHNICAL DOCUMENTS IN ORDER TO IDENTIFY ANY FUNCTIONAL OR OPERATIONAL REQUIREMENT NOT IDENTIFIED BY PREVIOUS ANALYSIS (FMECA, RCM).

	Name	Label	Description
	301.2.4.3.1A4	CONSOLIDAT SUPPORT/ FUNCTNL & MAINTENANC REQS	ACRONYMS: PURPOSE: CATEGORIZE ALL IDENTIFIED FUNCTIONAL AND SUPPORT REQUIREMENTS INTO THE FOLLOWING CATEGORIES AND SUB-CATEGORIES: 1. OPERATIONS -MISSION -TRAINING 2. TRAINING 3. SUPPLY -RECEIPT -STOCK/INVENTORY -ISSUE -CLASSIFICATION -SALVAGE 4. SUPPORT -SERVICING -CLEANING, PRESERVATION/STORAGE -LOADING/UNLOADING -ARMING/DISARMING -POL SERVICING (I.E., FUELING/DEFUELING) -CRYOGENIC SERVICING (I.E., LOX) -TOWING/RECOVERY/MOVING -CORROSION CONTROL -TRAINING DEVICE SUPPORT -TECHNICAL DIRECTIVE COMPLIANCE -SPECIAL INSPECTIONS -CALIBRATION/BORE-SIGHTING -ENVIRONMENTAL PROTECTION 5. CONTROL -PRODUCTION CONTROL -PRODUCT ASSURANCE

Name	Label	Description
301.2.4.3.2	DEVELOP MISSION/ OPERATIONS TASKS	ACRONYMS:LSA-LOGISTIC SUPPORT ANALYSIS PURPOSE: DEVELOP MISSION-RELATED TASKS (MISSION-PROFILE CHANGE, SERVICING) FROM A REVIEW OF THE MISSION-RELATED FUNCTIONAL REQUIREMENTS (AS IDENTIFIED IN TASK 301.2.4.3.1) AND THE INTENDED OPERATIONAL ENVIRONMENT. CONSIDERATION WILL BE GIVEN TO: 1. A GENERAL DESCRIPTION OF TASK FUNCTION. 2. TASK INTERVAL. 3. THE APPROPRIATE LEVEL AT WHICH THE TASKS WILL BE ACCOMPLISHED. 4. IMPACT OF PERFORMING THE TASK ON UNIT/SYSTEM AVAILABILITY. 5. SPECIAL REQUIREMENTS (FACILITIES, TRAINING EQUIPMENT, TOOL/SUPPORT EQUIPMENT). 6. HOW THE REQUIREMENT IS DETECTED. 7. ANY POTENTIAL HAZARDS ASSOCIATED WITH PERFORMING THE TASK. 8. WHETHER OR NOT THE TASK BEING DEVELOPED IS A HARDNESS CRITICAL PROCEDURE. 9. THE TECHNICAL MANUAL(TM) CODE IN WHICH THE TASK IS TO APPEAR. 10. WHETHER OR NOT THE TASK DEVELOPMENT PROCESS IS AN ADDITION OR A CHANGE. SEE DFD 301.2.4.3.2A FOR DETAILED DESCRIPTION OF PROCESSES TO IDENTIFY ALL MISSION/OPERATIONAL TASKS.
301.2.4.3.2A1	EVAL FUNCT RQMNT FOR APPROP. TASK	ACRONYMS: PURPOSE: EVALUATE EACH FUNCTIONAL/OPERATIONAL REQUIREMENT FOR THE PURPOSE IDENTIFYING THE APPROPRIATE TASK TO SATISFY THE REQUIREMENT.
301.2.4.3.2A2	DETERMINE TASK DESC	ACRONYMS: PURPOSE: DETERMINE THE GENERAL TASK DESCRIPTION OF THE TASK BEING DEVELOPED TO SATISFY THE REQUIREMENT UNDER ANALYSIS.
301.2.4.3.2A3	DEVELOP TASK CODE	ACRONYMS: PURPOSE: DEVELOP A UNIQUE IDENTIFYING TASK CODE IN ORDER TO DIFFERENTIATE EACH REQUIRED TASK FROM ANOTHER. EACH TASK CODE WILL CONSIST OF A SPECIFIC TASK DESCRIPTION, AN INTERVAL CODE IDENTIFYING THE TIME OR CYCLE INTERVAL BETWEEN TASKS, THE LEVEL OF MAINTENANCE OR OPERATIONS AT WHICH THE TASK IS TO BE ACCOMPLISHED, THE PARTICULAR SERVICE THAT WILL HAVE JURISDICTION OVER THE TASK (FOR PURPOSES OF THE SPECIFIC ANALYSIS BEING PERFORMED), THE IMPACT OF PERFORMING THE TASK ON SYSTEM/UNIT AVAILABILITY, AND, FINALLY, A SEQUENCE CODE SO THAT DUPLICATE TASKS CAN BE DIFFERENTIATED. SEE EXPLOSION DFD 301.2.4.3.2A3B FOR DETAILED DESCRIPTION OF PROCESSES TO DEVELOP DETAILED TASK CODE.

Name	Label	Description
301.2.4.3.2A3B1	DETERMINE SPECIFIC ACTION TO BE TAKEN	ACRONYMS: PURPOSE: DETERMINE, FROM THE GENERAL TASK DESCRIPTION AND A COMPARISON OF THE GENERAL TASK TO THOSE SPECIFIC TASK DESCRIPTIONS LISTED IN APPENDIX F OF MIL-STD 1388-2A, THE SPECIFIC ACTIONS AND CODES THAT WILL SATISFY THE GENERAL TASK DESCRIPTION.
301.2.4.3.2A3B2	ASSIGN TASK FUNCT CODE	ACRONYMS: PURPOSE: ASSIGN AN ASSOCIATED TASK FUNCTION CODE (FROM APPENDIX F, MIL-STD 1388-2A) ONCE THE SPECIFIC TASK TO BE DESCRIBED HAS BEEN IDENTIFIED.
301.2.4.3.2A3B3	DETERMINE TASK INTERVAL	ACRONYMS: PURPOSE: ASSIGN THE TASK INTERVAL BASED ON THE SYSTEM/EQUIPMENT TASK INTERVAL. OTHER IDENTIFIED TASKS AS A RESULT OF THIS ANALYSIS WILL BE IDENTIFIED AS UNSCHEDULED.
301.2.4.3.2A3B4	DETERMINE OPS/MAINT LEVEL	ACRONYMS: PURPOSE: DETERMINE THE LEVEL OF MAINTENANCE/OPERATIONAL ACTIVITY AUTHORIZED TO PERFORM THE TASK UNDER DEVELOPMENT. THESE CODES ARE FOUND IN DED 467, APPENDIX F, MIL-STD 1388-2A. THESE CODES SHALL BE IDENTIFIED BY A REVIEW OF THE MAINTENANCE CONCEPT.
301.2.4.3.2A3B5	DETERMINE SERVICE DESIGNATOR CODE	ACRONYMS: PURPOSE: IDENTIFY THE MILITARY SERVICE OR NON-MILITARY MAJOR GOVERNMENT AGENCY HAVING JURISDICTION OVER, OR EXECUTIVE MANAGEMENT RESPONSIBILITY FOR, THE ACQUISITION. A TOTAL OF SIX CODES ARE FOUND IN APPENDIX F OF MIL-STD 1388-2A.
301.2.4.3.2A3B6	DETERMINE OPER/CODE	ACRONYMS: PURPOSE: DETERMINE THE IMPACT ON SYSTEM/UNIT READINESS BY THE ACTUAL PERFORMANCE OF THE SPECIFIC CORRECTIVE OR PREVENTIVE TASK. AS A RESULT OF THIS ASSESSMENT, AN OPERABILITY CODE WILL BE ASSIGNED. THESE CODES ARE FOUND IN APPENDIX F OF MIL-STD 1388-2A.
301.2.4.3.2A3B7	CONSOLIDAT TASK CODE ELEMENTS	ACRONYMS: PURPOSE: CONSOLIDATE THE DIFFERENT ELEMENTS OF THE TASK CODE INTO THE PROPER ORDER TO IDENTIFY THE TASK UNDER DEVELOPMENT.
301.2.4.3.2A3B8	ASSIGN TASK CODE SEQUENCE	ACRONYMS: PURPOSE: ASSIGN A TWO-POSITION SEQUENCE CODE TO EACH TASK. THE ASSIGNMENT POLICY IS FOUND IN DED 467, APPENDIX F, MIL-STD 1388-2A.

Name	Label	Description
301.2.4.3.2A4	DETERMINE TASK FREQUENCY	ACRONYMS: PURPOSE: DETERMINE THE FREQUENCY OF PERFORMANCE OR OCCURANCE OF THE TASK IDENTIFIED BY THE TASK CODE AND EXPRESSED AS THE NUMBER OF OCCURANCES PER YEAR. THIS DATA ELEMENT WILL BE CALCULATED USING THE METHODS DESCRIBED IN APPENDIX A OF MIL-STD 1388-2A.
301.2.4.3.2A5	DETERMINE SPECIAL REQMNTS	ACRONYMS: PURPOSE: DETERMINE ANY SPECIAL REQUIREMENTS FOR THE PERFORMANCE OF THE TASK UNDER DEVELOPMENT. THIS DETERMINATION WILL ADDRESS THREE AREAS: FACILITIES REQUIREMENTS, TRAINING EQUIPMENT REQUIREMENTS, AND TOOL/SUPPORT EQUIPMENT REQUIREMENTS. I. FACILITIES REQUIREMENTS: THREE DIFFERENT TYPES OF REQUIREMENTS CAN BE IDENTIFIED HERE. THEY ARE: NEW/MODIFIED FACILITY EXISTING FACILITIES WITH ADDITIONAL RESOURCES ADEQUATE EXISTING FACILITIES. IDENTIFICATION OF SUPPORT EQUIPMENT REQUIREMENTS IS NECESSARY IN ORDER TO IDENTIFY SUCH ITEMS AS: AIR COOLING POWER REQUIREMENTS NORMALLY, THIS TYPE OF INFORMATION IS NOT DETERMINED DIRECTLY AND CAN BE OBTAINED FROM PROGRAM FACILITIES PLANNERS. WHEN A FACILITIES REQUIREMENT IS IDENTIFIED, THE TASK IDENTIFICATION CODE OF THE TASK UNDER DEVELOPMENT WILL BE ENTERED INTO RECORD F, CARD F2, BLOCKS 6, 9, AND 12. II. TRAINING EQUIPMENT REQUIREMENTS: AVAILABILITY OF EXISTING TRAINING EQUIPMENT IS NECESSARY IN ORDER TO MAKE THIS DETERMINATION. IF TRAINING MATERIAL IS NECESSARY TO PREPARE THE OPERATOR OR MAINTAINER TO PERFORM THE TASK, THEN A "Y" IS ENTERED INTO THE APPROPRIATE LSAR LOCATION. IF NOT, THEN AN "N" IS ENTERED INTO THE SAME LOCATION. THIS INFORMATION CAN BE OBTAINED FROM TRAINING DIVISIONS OR COMMANDS OF THE ACQUIRING ACTIVITY. III. TOOL/SUPPORT EQUIPMENT REQUIREMENTS: KNOWLEDGE OF CURRENTLY AVAILABLE TOOLS AND SUPPORT EQUIPMENT IS NECESSARY FOR THIS DETERMINATION. FUNCTIONAL AREAS SUCH AS MAINTENANCE ENGINEERING OR SUPPORT EQUIPMENT ENGINEERING WILL BE THE SOURCES FOR THIS INFORMATION.
301.2.4.3.2A6	ASSESS HAZARDOUS PROCEDURE CODE	ACRONYMS: PURPOSE: IDENTIFY THE POTENTIAL HAZARDS ASSOCIATED WITH PERFORMANCE OF THE TASK UNDER DEVELOPMENT. AN INTIMATE UNDERSTANDING OF THE PROPER TOOLS, SUPPORT EQUIPMENT FACILITIES WILL BE NECESSARY FOR THIS DETERMINATION. ALSO, KNOWLEDGE OF THE UNIT'S/SYSTEM'S OPERATION WILL BE REQUIRED.

Name	Label	Description
301.2.4.3.2A7	HARDNESS CRITICAL PROCEDURE ASSESSMENT	ACRONYMS: NBC - PURPOSE: DETERMINE WHETHER THE TASK UNDER DEVELOPMENT IS A HARDNESS CRITICAL PROCEDURE. HARDNESS CRITICAL REFERS TO RESISTANCE TO NBC ATTACK.
301.2.4.3.2A8	DEVELOP DETAILED TASK DESC	ACRONYMS: PURPOSE: PRECISELY DEFINE THE TASK UNDER DEVELOPMENT IN TERMS OF PREVIOUSLY IDENTIFIED TASK REQUIREMENTS. OUTPUTS OF THIS PROCESS ARE ALL THE NECESSARY INFORMATION FOR COMPLETE TASK IDENTIFICATION ON RECORD D, CARD D02, BLOCK 5. THIS PROCESS REPRESENTS A COMPILATION OF ALL PREVIOUS EVALUATIONS, ASSESSMENTS, AND/OR DETERMINATIONS CONCERNING THE TASK UNDER DEVELOPMENT.
301.2.4.3.3	DEVELOP ALL SUPPLY /SUPPORT/& CONTROL TASKS	ACRONYMS:LSA - LOGISTIC SUPPORT ANALYSIS RPSTL - REPAIR PARTS AND SPECIAL TOOLS LIST PURPOSE: FROM A REVIEW OF THE SUPPLY/SUPPORT & CONTROL - RELATED FUNCTIONAL REQUIREMENTS (AS IDENTIFIED IN TASK 301.2.4.3.1) AND THE INTENDED OPERATIONAL ENVIRONMENT, DEVELOP: SUPPLY (PREPARE FOR TRANSPORT) SUPPORT (SERVICING) CONTROL (PRODUCTION CONTROL/PRODUCT ASSURANCE) RELATED TASKS. CONSIDERATION WILL BE GIVEN TO: 1. A GENERAL DESCRIPTION OF TASK FUNCTION. 2. TASK INTERVAL. 3. THE APPROPRIATE LEVEL AT WHICH THE TASKS WILL BE ACCOMPLISHED. 4. IMPACT OF PERFORMING THE TASK ON UNIT/SYSTEM AVAILABILITY. 5. TASK FREQUENCY (REVIEW RELIABILITY ANALYSIS OF THE UNIT/SYSTEM). 6. MEASUREMENT BASE (OPERATING HOURS, FLIGHT HOURS, ETC.). 7. SPECIAL REQUIREMENTS (FACILITIES, TRAINING EQUIPMENT, TOOL/SUPPORT EQUIPMENT). 8. HOW THE REQUIREMENT IS DETECTED. 9. ANY POTENTIAL HAZARDS ASSOCIATED WITH PERFORMING THE TASK. 10. WHETHER OR NOT THE TASK BEING DEVELOPED IS A HARDNESS CRITICAL PROCEDURE. 11. THE TECHNICAL MANUAL/RPSTL TM CODE IN WHICH THE TASK IS TO APPEAR. 12. WHETHER OR NOT THE TASK DEVELOPMENT PROCESS IS AN ADDITION OR A CHANGE. (SEE DFD 301.2.4.3.4A FOR DETAILED DESCRIPTION OF PROCESSES TO IDENTIFY ALL SUCH TASKS.)

Name	Label	Description
301.2.4.3.3A1	EVAL FUNCT RQMNT FOR APPROP. TASK	ACRONYMS: PURPOSE: EVALUATE EACH FUNCTIONAL/OPERATIONAL REQUIREMENT TO IDENTIFY THE APPROPRIATE TASK FOR SUPPLY, SUPPORT AND CONTROL REQUIREMENTS NOT PREVIOUSLY COVERED.
301.2.4.3.3A2	DETERMINE TASK DESCRIPT	ACRONYMS: PURPOSE: DETERMINE THE GENERAL TASK DESCRIPTION OF THE TASK BEING DEVELOPED TO SATISFY THE REQUIREMENT UNDER ANALYSIS.
301.2.4.3.3A3	DEVELOP TASK CODE	ACRONYMS: PURPOSE: DEVELOP UNIQUE IDENTIFYING TASK CODE IN ORDER TO DIFFERENTIATE EACH REQUIRED SUPPLY, SUPPORT OR CONTROL TASK FROM ANOTHER. EACH TASK CODE WILL CONSIST OF: A SPECIFIC TASK DESCRIPTION AN INTERVAL CODE IDENTIFYING THE TIME OR CYCLE INTERVAL BETWEEN TASKS THE LEVEL OF MAINTENANCE OR OPERATIONS AT WHICH THE TASK IS TO BE ACCOMPLISHED THE PARTICULAR SERVICE THAT WILL HAVE JURISDICTION OVER THE TASK (FOR PURPOSES OF THE SPECIFIC ANALYSIS BEING PERFORMED) THE IMPACT OF PERFORMING THE TASK ON SYSTEM/UNIT AVAILABILITY A SEQUENCE CODE SO THAT DUPLICATE TASKS CAN BE DIFFERENTIATED SEE DFD 301.2.4.3.2A3B FOR DETAILED DESCRIPTION OF PROCESSES TO DEVELOP DETAILED TASK CODE.
301.2.4.3.3A4	DETERMINE TASK FREQUENCY	ACRONYMS: PURPOSE: TO DETERMINE THE FREQUENCY OF PERFORMANCE OR OCCURANCE OF THE TASK IDENTIFIED BY THE TASK CODE AND EXPRESSED AS THE NUMBER OF OCCURANCES PER YEAR. THIS DATA ELEMENT WILL BE CALCULATED USING THE METHODS DESCRIBED IN APPENDIX A OF MIL-STD 1388-2A.

Name	Label	Description
301.2.4.3.3A5	DETERMINE SPECIAL REQMTS	ACRONYMS: PURPOSE: DETERMINE SPECIAL REQUIREMENTS FOR THE PERFORMANCE OF THE TASK UNDER DEVELOPMENT. THIS DETERMINATION WILL ADDRESS THREE AREAS: FACILITIES REQUIREMENTS CONTROL REQUIREMENTS TOOL/SUPPORT EQUIPMENT REQUIREMENTS. I. FACILITIES REQUIREMENTS: DIFFERENT TYPES OF REQUIREMENTS CAN BE IDENTIFIED HERE. THEY ARE: NEW/MODIFIED FACILITY EXISTING FACILITIES WITH ADDITIONAL RESOURCES ADEQUATE EXISTING FACILITIES IDENTIFICATION OF SUPPORT EQUIPMENT REQUIREMENTS IS NECESSARY IN ORDER TO IDENTIFY SUCH ITEMS AS: AIR COOLING POWER REQUIREMENTS NORMALLY, THIS TYPE OF INFORMATION IS NOT DETERMINED DIRECTLY AND CAN BE GOTTEN FROM PROGRAM FACILITIES PLANNERS. WHEN A FACILITIES REQUIREMENT IS IDENTIFIED, THE TASK IDENTIFICATION CODE OF THE TASK UNDER DEVELOPMENT WILL BE ENTERED INTO RECORD F, CARD F2, BLOCKS 6, 9, AND 12. II. TOOL/SUPPORT EQUIPMENT REQUIREMENTS: KNOWLEDGE OF CURRENTLY AVAILABLE TOOLS AND SUPPORT EQUIPMENT IS NECESSARY FOR THIS DETERMINATION. FUNCTIONAL AREAS SUCH AS MAINTENANCE ENGINEERING WILL BE THE SOURCE FOR THIS INFORMATION. III. CONTROL REQUIREMENTS OTHER THAN PRODUCTION CONTROL AND QUALITY ASSURANCE CONTROL SHOULD BE DETERMINED HERE.
301.2.4.3.3A6	DETERMINE MEANS OF DETECTION	ACRONYMS: PURPOSE: IDENTIFY PRIMARY AND SECONDARY MEANS OF DETECTION OF THE REQUIREMENT FROM WHICH THE TASK UNDER DEVELOPMENT ORIGINATES. A TOTAL OF SIX TASKS CAN BE USED IN EITHER POSITION. A COMPLETE UNDERSTANDING OF THE ORIGINAL FAILURE MODE AND SYSTEM/UNIT DESIGN IS CRITICAL TO THIS DETERMINATION.

	Name	Label	Description
	301.2.4.3.4	DEVELOP ALL TRAINING TASKS	ACRONYMS:LSA - LOGISTIC SUPPORT ANALYSIS RPSTL - REPAIR PARTS AND SPECIAL TOOLS LIST PURPOSE: FROM A REVIEW OF THE TRAINING-RELATED FUNCTIONAL REQUIREMENTS (AS IDENTIFIED IN TASK 301.2.4.3.1) AND THE INTENDED OPERATIONAL ENVIRONMENT, DEVELOP TRAINING-RELATED TASKS. CONSIDERATION WILL BE GIVEN TO: 1. A GENERAL DESCRIPTION OF TASK FUNCTION. 2. TASK INTERVAL. 3. THE APPROPRIATE LEVEL AT WHICH THE TASKS WILL BE ACCOMPLISHED. 4. IMPACT OF PERFORMING THE TASK ON UNIT/SYSTEM AVAILABILITY. 5. TASK FREQUENCY (REVIEW RELIABILITY ANALYSIS OF THE UNIT/SYSTEM). 6. SPECIAL REQUIREMENTS (FACILITIES, TRAINING EQUIPMENT, TOOL/SUPPORT EQUIPMENT). 7. ANY POTENTIAL HAZARDS ASSOCIATED WITH PERFORMING THE TASK. 8. WHETHER OR NOT THE TASK BEING DEVELOPED IS A HARDNESS CRITICAL PROCEDURE. 9. THE TECHNICAL MANUAL/RPSTL TM CODE IN WHICH THE TASK IS TO APPEAR. 10. WHETHER OR NOT THE TASK DEVELOPMENT PROCESS IS AN ADDITION OR A CHANGE. SEE DFD 301.2.4.3.3A FOR DETAILED DESCRIPTION OF PROCESSES TO IDENTIFY ALL TRAINING TASKS.
	301.2.4.3A7	ASSESS HAZARDOUS PROCDEDURE CODE	
	301.2.4.3A8	HARDNESS CRITICAL PROCEDURE ASSESSMENT	
	301.2.4.3A9	DEVELOP DETAILED TASK DESCRIPTN	ACRONYMS: PURPOSE: PRECISELY DEFINE THE TASK UNDER DEVELOPMENT IN TERMS OF PREVIOUSLY IDENTIFIED TASK REQUIREMENTS. OUTPUT OF THIS PROCESS IS THE NECESSARY INFORMATION FOR COMPLETE TASK IDENTIFICATION ON RECORD D, CARD D02, BLOCK 5 . THIS PROCESS REPRESENTS A COMPILATION OF ALL PREVIOUS EVALUATIONS, ASSESSMENTS, AND/OR DETERMINATIONS CONCERNING THE TASK UNDER DEVELOPMENT.

Name	Label	Description
AOR	ANNUAL OPERATING REQUIREMENTS (AOR)	ACRONYMS: PURPOSE: THE ANNUAL OPERATING REQUIREMENT (AOR) OR ESTIMATED REQUIRED YEARLY RATE OF USAGE OF THE ITEM UNDER ANALYSIS.
DES/DAT/DRWGS	DESIGN DATA & DRAWINGS	ACRONYMS: TDP - TECHNICAL DATA PACKAGE PURPOSE: IDENTIFICATION OF EACH ITEM AND THE ITEM CONFIGURATION THAT PERFORM EACH OF THE SYSTEM FUNCTIONS. SYSTEM TECHNICAL DATA PACKAGE(TDP) WILL DESCRIBE THE SYSTEM'S INTERNAL AND INTERFACE FUNCTIONS BEGINNING AT SYSTEM LEVEL AND PROGRESSING TO THE LOWEST INDENTURE LEVEL OF THE SYSTEM. DESIGN DATA INCLUDED WILL BE FUNCTIONAL BLOCK DIAGRAMS OR SCHEMATICS.
DES/DATA/SOURCES	DESIGN DATA SOURCES	ACVRONYMS: PURPOSE: ONCE IT IS DETERMINED THAT THE DESIGN DATA IS TO BE CONSIDERED AS A SOURCE OF FUNCTIONAL AND OPERATIONAL REQUIREMENTS THE APPROPRIATE DOCUMENTS SHOULD BE REVIEWED.
DESIGNATED TASK FILE	DESIGNATED TASK FILES	ACRONYMS: PURPOSE: THIS DATA FLOW CARRIES THE FACILITY, CONTROL, TOOL AND SUPPORT REQUIREMENTS FOR EACH OPERATIONAL AND MAINTENANCE TASK IDENTIFIED FROM THE SYSTEM FUNCTIONAL REQUIREMENTS.
DSGN/UPDT	DESIGN UPDATED	ACRONYMS: PURPOSE: THE UPDATED DESIGN IS USED TO EVALUATE THE RELATED SUPPLY AND SUPPORT FUNCTIONS.
EVAL/RSLTS	EVALUATE RESULTS	ACRONYMS: PURPOSE: EVALUATION RESULTS OF FUNCTIONAL REQUIREMENTS REVIEW.

Name	Label	Description
FMECA/RES	FMECA ANALYSIS RESULTS - 301.2.4.1	PURPOSE: RESULTS FROM THE FAILURE MODES,EFFECT,AND CRITICALITY ANALYSIS (FMECA) PROVIDED. THIS DATA READS AS FOLLOWS: I. FMECA - TYPICAL FAILURE CONDITIONS: A. PREMATURE OPERATIONS. B. FAILURE TO OPERATE AT A PRESCRIBED TIME. C. INTERMITTENT OPERATION. D. FAILURE TO CEASE OPERATION AT A PRESCRIBED TIME. E. DEGRADED OUTPUT OR OPERATIONAL CAPABILITY. F. OTHER UNIQUE FAILURE CONDITIONS,AS APPLICABLE BASED UPON SYSTEM CHARACTERISTICS AND OPERATIONAL REQUIREMENTS OR CONSTRAINTS. II. CRITICALITY ANALYSIS - SEVERITY CLASSIFICATIONS: A. CATEGORY I - CATASTROPHIC - A FAILURE WHICH MAY CAUSE DEATH OR WEAPON SYSTEM LOSS (i.e.,AIRCRAFT, TANK,MISSLE,SHIP,ETC.) B. CATEGORY II - CRITICAL - A FAILURE WHICH MAY CAUSE SEVERE INJURY,MAJOR PROPERITY DAMAGE,OR MAJOR SYSTEM DAMAGE WHICH WILL RESULT IN MISSION LOSS. C. CATEGORY III - MARGINAL - A FAILURE WHICH MAY CAUSE MINOR INJURY,MINOR PROPERTY DAMAGE,OR MINOR SYSTEM DAMAGE WHICH DWILL RESULT IN DELAY OR LOSS OF AVAILABILITY OR MISSION DEGRADATION. D. CATEGORY IV - MINOR - A FAILURE NOT SERIOUS ENOUGH TO CAUSE INJURY,PROPERTY DAMAGE,OR SYSTEM DAMAGE ,BUT WHICH WILL RESULT IN UNSCHEDULED MAINTENANCE OR REPAIR. SOURCE OF DATA: LOGISTICS SUPPORT ANALYSIS (LSAR) RECORD B2 CARD B13 BLOCK 6. FMECA ANALYSIS - (MIL-STD-1629A).
FUN/REQMNTS	FUNCTIONAL SUPPORT REQUIREMENTS	ACRONYMS: PURPOSE: THE DEFINITIZED SUMMARY LISTING OF SYSTEM/UNIT FUNCTIONAL REQUIREMENTS.
GEN/TSK/DESC	GENERAL TASK DESCRIPTION	ACRONYMS: PURPOSE: THE GENERAL DESCRIPTION OF THE TASK TO BE ACCOMPLISHED BASED UPON THE FUNCTIONAL REQUIREMENT UNDER ANALYSIS.
HCP	HARDNESS CRITICAL PROCEDURE CODE	ACRONYMS: PURPOSE: A SINGLE POSITION CODE INDICATING WHETHER OR NOT THE PARTICULAR MAINTENANCE TASK UNDER ANALYSIS HAS A BEARING ON AN ITEM WHICH IS MISSION CRITICAL. NUCLEAR HCPs ARE PROCESSES, FINISHES, SPECIFICATIONS, MANUFACTURING TECHNIQUES AND/OR PROCEDURES WHICH ARE HARDNESS CRITICAL, AND WHICH IF CHANGED COULD DEGRADE NUCLEAR HARDNESS (SEE MIL-STD 1388-2A, APPENDIX F, DED 153)

Name	Label	Description
HMPC	HAZARDOUS MAINTENANCE PROCEDURE CODE	ACRONYMS: PURPOSE: THE APPROPRIATE HAZARDOUS MAINTENANCE PROCEDURE CODE ESTABLISHED FOR THE TASK UNDER DEVELOPMENT. THIS IS A CODE WHICH DENOTES WHETHER THE PERFORMANCE OF THE MAINTENANCE ACTION EXPOSES THE ASSIGNED PERSONNEL TO HAZARDOUS CONDITIONS. THIS CODE CAN BE: (A) - POTENTIAL LOSS OF LIFE CONSEQUENCES RESULTING FROM THE INCORRECT OR IMPROPER PERFORMANCE OF MAINTENANCE. (B) - POTENTIAL SEVERE INJURY RESULTING FROM THE INCORRECT OR IMPROPER PERFORMANCE OF MAINTENANCE. (C) - POTENTIAL MINOR INJURY RESULTING FROM THE INCORRECT OR IMPROPER PERFORMANCE OF MAINTENANCE. (D) - NO POTENTIAL DANGER TO MAINTENANCE PERSONNEL. THESE CODES CAN BE FOUND IN MIL-STD 1388-2A, APPENDIX F, DED 155.
INIT/ACT	INITIATING ACTION	THE REQUIRED ACTIONS OF THOSE (IF MORE THAN ONE) ACTIVITIES NECESSARY TO ACTIVATE AN ILS ELEMENT ASSESSMENT FOR A SYSTEM AND/OR EQUIPMENT. THIS PROVIDES THE FORMAL AUTHORIZATION FOR THE PERFORMANCE OF AN ILS EFFORT. THESE INITIATING ACTIONS ARE NORMALLY PERFORMED BY THE ILSMT AND/OR THE PROGRAM MANAGER.
LSAR/REC/B	LSAR REC B SEVEN ELEMENTS	ACRONYMS: PURPOSE: SEVEN VARIOUS ELEMENTS FOUND IN THE LSAR B, B1, AND B2 SHEETS. THESE ELEMENTS ARE AS FOLLOWS: 1. RECORD B/CARD 07/BLOCK 9 - MEAN TIME BETWEEN MAINTENANCE ACTIONS (INDUCED). 2. RECORD B/CARD 07/BLOCK 10 - MEAN TIME BETWEEN MAINTENANCE ACTIONS (NO DEFECT). 3. RECORD B/CARD 10/BLOCK 4 - MAINTENANCE CONCEPT. 4. RECORD B/CARD 11/BLOCK 5A AND 5B - RCM LOGIC RESULTS AND DISPOSITION. 5. RECORD B1/CARD 15/BLOCK 6 - FAILURE DETECTION METHOD. 6. RECORD B2/CARD 16/BLOCK 9 - FAILURE MODE RATIO (ALPHA). 7. RECORD B2/CARD 16/BLOCK 10 - FAILURE RATE.
MAINT/CNCPT	MAINTENANCE CONCEPT	ACRONYMS: PURPOSE: THE MAINTENANCE CONCEPT DEVELOPED FOR THE UNIT/SYSTEM UNDER ANALYSIS. THIS DATA FLOW IS TO AID THE ANALYST IN DETERMINING THE MAINTEANCE LEVEL AT WHICH THE TASK UNDER DEVELOPMENT WILL BE PERFORMED. DATA SOURCE: LOGISTICS SUPPORT ANALYSIS RECORD B.

Name	Label	Description
MEANS/DET	MEANS OF DETECTION	ACRONYMS: PURPOSE: THE PRIMARY AND SECONDARY MEANS BY WHICH A SYSTEM, SUBSYSTEM, ASSEMBLY, OR SUBASSEMBLY IS CHECKED TO VERIFY ITS OPERATIONAL STATE OR CONDITION. THE FIRST LETTER OF THIS TWO-CHARACTER CODE (LEFT MOST POSITION) IDENTIFIES THE PRIMARY MEANS OF DETECTION AND THE RIGHT POSITION IDENTIFIES THE SECONDARY MEANS. THIS CODE CAN CONSIST OF THE FOLLOWING ENTRIES: (B) - BUILT-IN-TEST EQUIPMENT (M) - MANUAL TEST EQUIPMENT (COMMON) (N) - MANUAL TEST EQUIPMENT (PECULIAR) (A) - AUTOMATIC TEST EQUIPMENT (COMMON) (P) - AUTOMATIC TEST EQUIPMENT (PECULIAR) (H) - HUMAN DETECTION THESE ENTRIES CAN BE FOUND IN MIL-STD 1388-2A, APPENDIX F, DED 242.
MIL-STD 1388-1A	MIL-STD 1388-1A TASK 301	ACRONYMS: PURPOSE: THIS DATA FLOW PROVIDES THE FRAMEWORK TO IDENTIFY THE OPERATIONS AND SUPPORT FUNCTIONS THAT MUST BE PERFORMED FOR EACH SYSTEM/EQUIPMENT ALTERNATIVE UNDER CONSIDERATION
MIL-STD 1388-2A/467A	MIL-STD 1388-2A DED 467 SIX ELEMENTS	ACRONYMS: PURPOSE: THE SIX ELEMENTS (A-F) OF DED 467, APPENDIX F, MIL-STD 1388-2A. THESE ELEMENTS ARE USED IN FIVE LOCATIONS IN THE DFDs FOR THIS SUBTASK. THESE SIX ITEMS ARE: 1. TASK FUNCTION CODE (A) - THE LISTING OF TASK FUNCTION CODES ASSOCIATED WITH THE TASK DESCRIPTIONS. EACH TASK DESCRIPTION IS ASSIGNED A UNIQUE TASK FUNCTION CODE. 2. TASK INTERVAL CODE (B) - THE LISTING OF TASK INTERVALS WHICH IDENTIFY THE SCHEDULED OR UNSCHEDULED TIMING OF THE TASK UNDER DEVELOPMENT. 3. OPERATIONS/MAINTENANCE LEVEL (C) - THE LISTING OF CODES WHICH IDENTIFIES A UNIQUE MAINTENANCE LEVEL. 4. SERVICE DESIGNATOR CODE (D) - THE LISTING OF SINGLE-DIGIT CODES IDENTIFYING THE MILITARY SERVICE OR NON-MILITARY MAJOR GOVERNMENT AGENCY HAVING JURISDICTION OVER, OR EXECUTIVE MANAGEMENT RESPONSIBILITY FOR THE ACQUISITION OF THE ITEM/SYSTEM UNDER DEVELOPMENT. 5. OPERABILITY CODE (E) - THE LISTING OF SINGLE-DIGIT CODES WHICH IDENTIFY THE STATUS OF THE END ITEM WHILE THE TASK UNDER DEVELOPMENT IS BEING PERFORMED. 6. TASK SEQUENCE CODE (F) - A TWO-POSITION CODE ASSIGNED TO EACH TASK. IF THE COMBINATION OF THE FIRST FIVE ELEMENTS OF THE TASK CODE IS UNIQUE, THE ENTRY FOR THE TASK WILL BE "AA". IF THE FIRST FIVE POSITIONS ARE DUPLICATED, THE FIRST OF THE TASKS WILL HAVE A SEQUENCE CODE OF "AA", THE SECOND WILL BE "AB", FOLLOWING THROUGH TO "99".

Name	Label	Description
MIL-STD1369A	MIL-STD 1369 ILS PROGRAM REQUIREMENTS	ACRONYMS: PURPOSE: THIS DATA FLOW IDENTIFIES ILS REQUIREMENTS FOR SPECIFYING SPECIAL TASK REQUIREMENTS. IT REORGANIZES THE INTEGRATED LOGISTIC SUPPORT PROGRAM INTO IDENTIFIABLE TASKS (SIMILAR TO THE LSA TASKS UNDER MIL-STD 1388-1). EACH TASK THEN DESCRIBES IN DETAIL SPECIFIC TASK REQUIREMENTS, POTENTIAL INPUTS AND DESIREABLE OUTPUTS.
MIS/SPRT/SOURCES	MISSION/ SUPPORT DATA SOURCES	ACRONYMS: PURPOSE: THIS DATA FLOW CARRIES MISSION AND EXISTING OPERATIONS RELATED DATA TO THE ANALYST FOR REVIEW OF MISSION SUPPORT RESOURCE REQUIREMENTS. THESE DOCUMENTS INCLUDE TECHNICAL REFERENCE MANUALS, MISSION ORIENTED PLANNING DOCUMENT HELD IN THE ACQUIRING ACTIVITY FILE.
MISSION/REL/TSK	MISSION RELATED TASKS	ACRONYMS: PURPOSE: THOSE OPERATIONS RELATED TASKS IDENTIFIED AS "MISSION" IN SUBTASK 301.2.4.3.2 FOR THE PURPOSE OF DOCUMENTATION. DOCUMENTATION OF THESE TASKS WILL BE ON LSAR DATA RECORD D, CARD D02, BLOCK 5. THESE TASKS ARE PROFILE CHANGE-AND-SERVICING-RELATED. '
O/M/LEVEL	OPERATIONS/ MAINTENANCE LEVEL CODE	ACRONYMS: PURPOSE: THE OPERATIONAL/MAINTENANCE LEVEL CODE DENOTING AT WHICH LEVEL THE TASK IS TO BE PERFORMED.
OP/CODE	OPERABILITY CODE	ACRONYMS: PURPOSE: THE PROPER OPERABILITY CODE AS DETERMINED FOR THE TASK UNDER DEVELOPMENT.
OP/ENV	OPERATIONAL ENVIRONMENT	ACRONYMS: PURPOSE: THE MISSION AREA ANALYSIS, THREAT ANALYSIS AND SYSTEM REQUIREMENTS DOCUMENTATION WILL PROVIDE THE BACKGROUND INFORMATION REQUIRED TO DEVELOP ANY ADDITIONAL OPERATIONAL ENVIRONMENT.
OP/FUN	OPERATION FUNCTIONS REQUIREMENTS	ACRONYMS: PURPOSE: THOSE OPERATIONS RELATED FUNCTIONS IDENTIFIED AS A RESULT OF REVIEWING EXISTING OPERATIONS REQUIREMENTS DOCUMENTS. THESE REQUIREMENTS ARE PROFILE AND SERVICING RELATED.
OP/MAINT/FUNC	OPERATIONAL & MAINTINANCE FUNCTIONS	ACRONYMS: PURPOSE: IDENTIFIED LIST OF OPERATIONAL AND MAINTENANCE FUNCTIONS DEVELOPED AS ARESULT OF A REVIEW OF APPROPRIATE MISSION STATEMENTS, DEVELOPMENTAL MANUALS etc.

Name	Label	Description
PROD/ASSR/TSKS	PRODUCT ASSURANCE TASKS	ACRONYMS:LSAR-LOGISTIC SUPPORT ANALYSIS RECORD PURPOSE: THIS DATA FLOW CARRIES THOSE CONTROL-RELATED TASKS IDENTIFIED AS "PRODUCT ASSURANCE" IN SUBTASK 301.2.4.3.6 FOR THE PURPOSE OF DOCUMENTATION. DOCUMENTATION OF THESE TASKS WILL BE ON LSAR DATA RECORD D, CARD D02, BLOCK 5.
PROD/CNTL/TSK	PRODUCTION CONTROL TASKS	ACRONYMS: PURPOSE: THIS DATA FLOW CARRIES THOSE CONTROL RELATED-TASKS IDENTIFIED AS PRODUCTION IN SUBTASK 301.2.4.3.6 FOR DOCUMENTATION ON LSAR DATA RECORD D, CARD D02, BLOCK 5.
REL/TECH/DTA	RELEVANT TECHNICAL DATA	ACRONYM: PURPOSE: THIS DATA FLOW CARRIES SPECIFIC AND RELEVANT INFORMATION FROM OR TO DATA STORES AND PROCESSES. THE DATA IT CARRIES DEPENDS UPON WHAT IS REQUIRED AND AVAILABLE. IT IS THEREFORE NECESSARY TO REVIEW THE AVAILABLE INFORMATION FROM WHICH THE DATA FLOWS AND WHAT THE REQUIREMENT OF THE RECIPIENT FLOW OR PROCESS.
REV/PM/DAT/FILE	REVIEW PM DATA FILE FOR RQMTS ID	ACRONYMS: PURPOSE: THOSE DOCUMENTS FROM THE PROGRAM MANAGERS DATA FILE NEEDED TO ASSIST IN THE DETERMINATION OF ADDITIONAL FUNCTIONAL AND OPERATIONAL REQUIREMENTS.
RVW/T/F/O	REVIEW TECH FILE-OPERATIONS	ACRONYMS: PURPOSE: THOSE SERVICE DOCUMENTS (MANUALS, REGULATIONS, BULLETINS, DIRECTIVES, PAMPHLETS, etc.) THAT WILL BE USED TO ASSIST IN THE DEVELOPMENT OPERATIONAL REQUIREMENTS NOT IDENTIFIED THROUGH OTHER SOURCES.
RVW/T/F/OS	REVIEW TECH FILE-OTHER SUPPORT	ACRONYMS: PURPOSE: THOSE SERVICE DOCUMENTS (MANUALS, REGULATIONS, BULLETINS, DIRECTIVES, PAMPHLETS, ETC.) THAT WILL ASSIST IN THE DEVELOPMENT OF SUPPORT-RELATED FUNCTIONAL REQUIREMENTS NOT IDENTIFIED BY OTHER SOURCES.
RVW/T/F/S	REVIEW TECH FILE-SUPPLY	ACRONYMS: PURPOSE: THOSE SERVICE DOCUMENTS (REGULATIONS, MANUALS, BULLETINS, DIRECTIVES, PAMPHLETS etc.) THAT WILL ASSIST IN THE DEVELOPMENT OF SUPPLY RELATED FUNCTIONAL AND OPERATIONAL REQUIREMENTS.

Name	Label	Description
RVW/T/F/SS	REVIEW TECH FILE-SERVICE SUPPORT	ACRONYMS: PURPOSE: THOSE SERVICE DOCUMENTS (REGULATIONS, DIRECTIVES, MANUALS, BULLETINS, PAMPHLETS, etc.) THAT WILL ASSIST IN THE DEVELOPMENT OF SERVICING - RELATED FUNCTIONAL AND OPERATIONAL REQUIREMENTS.
S/D/C	SERVICE DESIGNATOR CODE	ACRONYMS: PURPOSE: THE SERVICE DESIGNATOR CODE OF THE AUTHORIZING ACTIVITY FOUND IN DED 467, APPENDIX F, MIL-STD 1388-2A, DED 467D.
SEQ/T/C	SEQUENCED TASK CODE	ACRONYMS: PURPOSE: THE SEQUENCED, SEVEN-POSITION TASK CODE FOR THE PURPOSE OF FURTHER IDENTIFYING PERTINENT INFORMATION CONCERNING THE TASK UNDER DEVELOPMENT AS REQUIRED ON RECORD C, CARD C06, BLOCK 3. THIS CODE IS FURTHER EXTENDED AUTOMATICALLY BY THE COMPUTER TO A UNIQUE FOUR-POSITION CODE IN RECORD C, CARD C06, BLOCK 7 WHICH IS USED FOR REFERENCING PURPOSES ON THE TASK DESCRIPTION MASTER FILE AND CROSS-REFERENCING TO THE LCN MASTER FILE.
SPCL/RQMTS	SPECIAL REQUIREMENTS	CONTAINS THE FACILITIES, SUPPORT EQUIPMENT, TOOLS, AND TRAINING EQUIPMENT REQUIREMENTS FOR THE TRAINING TASK. THE TRAINING LOCATION IS ALSO DOCUMENTED. THE INFORMATION IS DOCUMENTED ON THE FOLLOWING LSAR RECORDS: FACILITIES — RECORD F, CARD 2, BLOCKS 6,9,12 SPT EQMT & TOOLS — RECORD D, CARD 7, BLOCK 8 TRAINING EQMT — RECORD E, CARD 2, BLOCK 3 TRAINING LOCTN — RECORD D, CARD 6, BLOCK 7K
SPEC/RQMNTS	SPECIAL TASK REQUIREMENTS	ACRONYMS: PURPOSE: THOSE SPECIAL TASK REQUIREMENTS (FACILITIES, TRAINING EQUIPMENT, AND TOOLS/SUPPORT EQUIPMENT) DETERMINED TO BE NECESSARY FOR THE PERFORMANCE OF THE TASK UNDER DEVELOPMENT.
SPEC/TASK	SPECIFIC TASK DESCRIPTION	ACRONYMS: PURPOSE: THIS DATA FLOW CARRIES SPECIFIC MAINTENANCE OR OPERATIONAL TASK DESCRIPTIONS FOR THE ITEM UNDER ANALYSIS.
SPT/TSK	SUPPORT TASKS	ACRONYMS: PURPOSE: IDENTIFIED SUPPORT TASKS.
SUPLY/TSKS	SUPPLY TASKS	ACRONYMS: PURPOSE: IDENTIFY SUPPLY TASKS.

Name	Label	Description
SUPPL/SUPPRT/CNTRL F	SUPPLY/ SUPPORT & CONTROL FUNCTIONAL REQUIREMENTS	ACRONYMS: PURPOSE: THIS DATA FLOW CARRIES THE THE OPERATIONAL, MAINTENANCE & SUPPORT TASKS NOT PREVIOUSLY IDENTIFIED. THEY ARE CATEGORIZED BY SUPPLY, SUPPORT OR CONTROL FUNCTION AND HAVE BEEN SORTED IN THAT FASHION SO THAT ALL SIMILAR FUNCTIONS COME TOGETHER.
SUPPRT/CNTRL/TSKS	IDENTIFIED SUPPLY, SUPPORT AND CONTROL TSKS	THIS DATA FLOW CARRIES A LISTING OF ALL OF THE SUPPLY, SUPPORT AND CONTROL TASKS DETERMINED AS REQUIRED IN PROCESS 301.2.4.3 FOR USE IN DEVELOPING THE TRAINING REQUIREMENTS TO ASSURE TASK SUPPORT.
SYST. SUPPLY/SPPRT/C	SYSTEM SUPPLY/SPPRT /CONTROL CONCEPTS	ACRONYM: PURPOSE: THIS DATA FLOW CARRIES (1) MAINTENANCE CONCEPTS, (2) OPERATIONAL REQUIREMENTS, (3) A COMBINATION OF (1) & (2) FOR THE SPECIFIC ITEMS OF THE SYSTEM/EQUIPMENT. EACH ITEM CONTAINED IN THE DATA FIELD HAS ASSOCIATED SUPPLY, SUPPORT AND/OR CONTROL TASKS THAT ARE REQUIRED FROM A PROGRAM, OPERATIONAL OR MAINTENANCE POINT OF VIEW. EXAMPLES ARE SAMPLE DATA COLLECTION, REFUELING REQUIREMENTS, CHECKS OF EXTERNAL CABLING, ETC.
T/F/C	TASK FUNCTION CODE	ACRONYMS: PURPOSE: THE SPECIFIC TASK CODE DEVELOPED FOR THE TASK UNDER ANALYSIS.
T/I/LISTING	TASK INTVL LISTING	ACRONYMS: PURPOSE: TASK INTERVAL LISTING IN DED 467, APPENDIX F, MIL-STD 1388-2A PROVIDING A LISTING OF THE TIME INTERVALS USED IN THE DEVELOPMENT OF THE MAINTENANCE TASK. THE TASK INTERVAL CHOSEN FOR THE TASK WILL FORM THE BASIS FOR DETERMINING THE TASK FREQUENCY.
T/M/CODE	TECHNICAL MANUAL CODE	ACRONYMS: PURPOSE: THE TWO-DIGIT CODE DEVELOPED FOR THE TASK UNDER DEVELOPMENT THAT IDENTIFIES THE TECHNICAL MANUAL/ORDER IN WHICH THE TASK WILL APPEAR. THIS CODE IS PROVIDED BY THE AUTHORIZING ACTIVITY.
TASK FREQ	TASK FREQNCY	ACRONYMS: PURPOSE: THIS DATA FLOW CARRIES THE FREQUENCY OF PERFORMANCE OR OCCURANCE OF TASKS IDENTIFIED BY TASK CODE AND EXPRESSED AS THE NUMBER OF ANNUAL OCCURANCES.

Name	Label	Description
TASK/CODE	TASK CODE	ACRONYMS: PURPOSE: THE UNSEQUENCED TASK CODE DEVELOPED FOR THE TASK UNDER ANALYSIS. THIS PORTION OF THE TOTAL TASK CODE REPRESENTS THE FIRST FIVE FIELDS (TASK FUNCTION, TASK INTERVAL, O/M LEVEL, SERVICE DESIGNATOR, OPERABILITY CODE). EXAMPLE: "HGONE".
TASK/INTVL	TASK INTERVAL CODE	ACRONYMS: DED - DATA ELEMENT DESCRIPTION MIL-STD - MILITARY STANDARD PURPOSE: THE SPECIFIC TASK INTERVAL CODE AS DETERMINED FOR THE TASK UNDER ANALYSIS. THIS CODE CAN BE FOUND IN MIL-STD 1388-2A, APPENDIX F, DED 467B.
TNG/RTNL	TRAINING RATIONALE	ACRONYMS: PURPOSE: THIS DATA FLOW CARRIES THE TRAINING RATIONALE TO BE RECORDED IN LSAR RECORD D1 CARD 06 BLOCK 7J DETAILS ON PREPARATION ARE IN DED 503 MIL-STD 1388-2A APP 'F'.
TNG/TSK	TRAINING TASK DETAIL	ACRONYMS: LSAR - LOGISTICS SUPPORT ANALYSIS RECORD PURPOSE THIS DATA FLOW CARRIES ALL THE DETAIL NECESSARY TO UPDATE THE LSAR FOR TRAINING TASKS. THIS DETAIL WILL BE PLACED IN LSAR RECORD D, CARD D02, BLOCK 5. IT INCLUDES THE 7 CHARACTER TASK CODE AND THE CODE FOR THE TRAINING RECOMMENDATION.
TRAINING TASKS	IDENTIFIED TASKS REQRNG TRAINING	ACRONYMS: PURPOSE: THIS DATA FLOW CARRIES ALL TRAINING RELATED TASKS THAT WERE PREVIOUSLY IDENTIFIED IN THE PRECEDING PROCESS. IT INCLUDES THE TECHNICAL MANUAL CODE AND ALL THE NECESSARY INFORMATION TO DETERMINE THE TASK DETAIL FOR UPDATING THE LSAR.

Name	Label	Description
AAF	ACQUIRING ACTIVITY FILE	CONTAINS THOSE RECORDS, DOCUMENTS, DECISION PAPERS, SCHEDULES THAT WERE PREPARED AS PART OF THE ACQUISITION INITIATION, JUSTIFICATION, AND PLANNING PRIOR TO THE ASSIGNMENT OF A PROGRAM MANAGER. THE ITEMS IN THIS DATA STORE INCLUDE: A. THREAT ANALYSIS DATA B. O&O PLAN C. READINESS OBJECTIVES DATA D. FUNTIONAL REQUIREMENTS DATA E. PROJECTED SCHEDULE DATA F. LOGISTICS RESOURCES DATA G. DESIRED R & M PARAMETERS H. TOA I. TOD J. COST & OPERATIONAL EFFECTIVENESS ANALYSIS (COEA) DATA K. PROJECTED COST DATA L. JUSTIFICATION OF MAJOR SYSTEM NEW START (JMSNS) DATA M. REQUIRED OPERATIONAL CAPABILITY (IF PREPARED PRIOR TO ASSIGNMENT OF PROGRAM MANAGER - ELSE FOUND IN PM FILES)
DES/F/RSI	DESIGN FILE	PURPOSE: THIS STORE CONTAINS DESIGN INFORMATION WHICH WILL AID IN ASSESSING S&I INTERFACES TO INCLUDE RSI. SOURCE OF DATA: CONTRACT DELIVERABLES, DESIGN REVIEW MINUTES, DRAWINGS, SPECS, WORKING GROUP OBSERVATIONS/COMMENTS.
LSAR/F	LSAR FILE	THIS DATA STORE REFERS TO THE ENTIRE LSAR RECORDS A THROUGH J. THESE RECORDS ARE WHERE ALL REQUIREMENTS IDENTIFIED DURING TASK DEVELOPMENT ARE STORED.
MAINT/CNCPT	MAINTENANCE CONCEPT	THIS IS NARRATIVE DESCRIPTION IDENTIFYING THE BROAD, PLANNED APPROACH TO BE EMPLOYED IN SUSTAINING THE SYSTEM/EQUIPMENT SEE DED 204 MIL-STD 1388 2A APP 'F'. THIS CONCEPT IS STORED IN LSAR B CARD 10 BLOCK 4.

Name	Label	Description
P/F	POLICY FILES	CONTAINS THOSE MILITARY PUBLICATIONS, DECISION PAPERS, MISSIONS & FUNCTIONS, etc, WHICH ARE NEEDED TO ESTABLISH THE LOGISTICAL SUPPORT AND REVIEW REQUIREMENTS OF THE ITEM/EQUIPMENT DEVELOPMENT PROGRAM. THIS DATA STORE INCLUDES: [SEE ALSO P/F(2)] 1. AR 12-16, "MUTUAL LOGISTICS SUPPORT BETWEEN THE U.S. AND OTHER NORTH ATLANTIC TREATY ORGANIZATION FORCES" 1a. AR 70-1, "SYSTEMS ACQUISITION POLICY AND PROCEDURES" 1b. AR 70-2, "RESEARCH, DEVELOPMENT, & ACQUISITION MATERIEL STATUS RECORDING" 1c. AR 70-10, "R&D - TEST & EVALUATION DURING DEVELOPMENT AND ACQUISITION OF MATERIEL" 1d. "AR 570-9, "MANPOWER AND EQUIPMENT CONTROL - HOST NATION SUPPORT" 2. AR 700-9, "POLICIES OF THE ARMY LOGISTIC SYSTEM" 3. AR 700-82, "JOINT REGULATION GOVERNING THE USE AND APPLICATION OF UNIFORM SOURCE MAINTENANCE AND RECOVERABILITY CODES" 4. AR 700-127, "INTEGRATED LOGISTICS SUPPPORT" 5. AR 725-50, "REQUISITIONING, RECEIPT AND ISSUE SYSTEM" 6. AR 750-1, "MAINTENANCE OF SUPPLIES & EQUIPMENT - ARMY MATERIEL MAINTENANCE CONCEPTS & POLICIES" 7. AMC-R-700-27, "LEVEL OF REPAIR ANALYSIS (LORA) PROGRAM" 8. AMC-R-750-10, "DEPOT MAINTENANCE INTERSERVICE" 9. DA PAM 700-4 10. DA PAM 700-28, "INTEGRATED LOGISTIC SUPPORT PROGRAM ASSESSMENT ISSUES AND CRITERIA" 11. DA PAM 700-50, "INTEGRATED LOGISTIC SUPPORT - DEVELOPMENTAL SUPPORTABILITY TEST AND EVALUATION GUIDE" 12. DA PAM 700-55, "INSTRUCTIONS FOR PREPARING THE INTEGRATED LOGISTIC SUPPORT PLAN" 12a. DA PAM 738-750, "THE ARMY MAINTENANCE MANAGEMENT SYSTEMS (TAMMS)" 13. DA PAM 750-21, "LOGISTIC SUPPORT MODELLING" 14. AMC PAM 700-4, "LOGISTICS SUPPORT ANALYSIS TECHNIQUES GUIDE (WITH PALMAN)" 14a. AMC PAM 700-11, "LOGISTICS SUPPORT ANALYSIS REVIEW TEAM GUIDE" 15. AMC PAM 750-2, "MAINTENANCE OF SUPPLIES AND EQUIPMENT GUIDE TO RELIABILITY CENTERED MAINTENANCE" 16. MIL-STD-152, "TECH REVIEW GUIDELINES" 17. MIL-STD-210A, "CLIMATIC EXTREMES FOR MILITARY EQUIPMENT" 18. MIL-STD-470, -471, "MAINTAINABILITY STANDARDS" 19. MIL-STD-756, "RELIABILITY MODELLING & PREDICTIONS" 20. MIL-STD-780, "MAINTENANCE ENGINEERING ANALYSIS CONTROL NUMBER (MEACNS) FOR AERONAUTICAL EQUIPMENT, UNIFORM NUMBERING SYSTEM 21. MIL-STD-781, "RELIABILITY DESIGN QUALIFICATION AND PRODUCTION ACCEPTANCE TESTS: EXPONENTIAL DISTRIBUTION 22. MIL-STD-785B, "RELIABILITY PROGRAM FOR SYSTEMS AND EQUIPMENT DEVELOPMENT & PRODUCTION" 23. MIL-STD-810, "ENVIRONMENTAL TEST METHODS & ENGINEERING GUIDELINES" 24. MIL-STD-881, "WORK BREAKDOWN STRUCTURES FOR DEFENSE MATERIEL ITEMS 25. MIL-STD-882, "SYSTEM SAFETY PROGRAM REQUIRMENTS" 26. MIL-STD-965, "PARTS CONTROL PROGRAM" 27. MIL-STD-1369A, "INTEGRATED LOGISTIC SUPPORT PROGRAM REQUIREMENTS" 28. MIL-STD-1388-1A, "LOGISTICS SUPPORT ANALYSIS" 29. MIL-STD-1388-2A, "LOGISTICS SUPPORT ANALYSIS RECORD" 30. MIL-STD-1629, "PROCEDURES FOR PERFORMING A FAILURE MODE, EFFECTS & CRITICALITY ANALYSIS"

Name	Label	Description
		31. MIL-HDBK-472, "MAINTAINABILITY PREDICTION" 32. MIL-M-24100B, "FUNCTIONALY ORIENTED MAINTENANCE MANUALS (FOMM) FOR EQUIPMENT & SYSTEMS"
PM/DF	PROGRAM MANAGER DATA FILE	CONTAINS THOSE FILES AND DATA WHICH ARE NORMALLY DEVELOPED BY AND/OR RETAINED BY THE PROGRAM MANAGER FOR PROPER MANAGEMENT OF THE DEVELOPMENT PROGRAM. THESE FILES INCLUDE: 1. ENGINEERING DRAWINGS 2. ENGINEERING CHARACTERISTICS 3. DT/OT RESULTS 4. CONCEPT FORMULATION PACKAGE (CFP) 5. DESIGN CONCEPT PAPER (DCP) 6. TYPE TECHNICAL REVIEWS REQUIRED 7. MILESTONE SCHEDULES 8. FUNDING PROFILES 9. REQUIRED OPERATIONAL CAPABILITIES (ROC) 10. ITEM/EQUIPMENT SPECIFICATIONS 11. ITEM/EQUIPMENT MISSIONS & FUNCTIONS 12. EQUIPMENT, MANPOWER, AND TECHNICAL RISK ASSESSMENTS (FROM LSA TASK 301.2.3 13. TRADE OFF DETERMINATION ANALYSIS (TOD) 14. TRADE OFF ANALYSIS (TOA) 15. BEST TECHNICAL APPROACH ANALYSIS (BTA) 16. COST AND OPERATIONAL-EFFECTIVENESS ANALYSIS (COEA)
SYS/DET/DES	SYSTEM DETAIL DESIGN	THIS DATA STORE CONTAINS INFORMATION ON THE DESIGN OF THE SYSTEM BEING INVESTIGATED. IT SUPPLIES ENGINEERING DESIGN DATA AND DRAWINGS.
T/F	SEVEN TECHNICAL FILES	ACRONYMS: PURPOSE: SEVEN TECHNICAL FILES USED FOR THE PURPOSE OF PROVIDING SOURCES OF DATA. THEY CONSIST OF: 1. OTHER SUPPORT TECHNICAL FILE 2. SUPPLY TECHNICAL FILE 3. OPERATIONS/MISSIONS TECHNICAL FILE 4. SERVICING SUPPORT TECHNICAL FILE 5. TRAINING TECHNICAL FILE 6. MAINTENANCE TECHNICAL FILE 7. COMMUNICATION/CONTROL TECHNICAL FILE

	Name	Label	Description
	PM/ILSMT	PROGRAM MANAGER'S TEAM	THE PROGRAM MANAGER OR THOSE ACTIVITIES, AGENCIES, OR AUTHORITIES THAT ARE RESPONSIBLE FOR THE INITIATION OF THE REQUIREMENT FOR AN ILS ELEMENT ASSESSMENTDURING A DEVELOPMENT PROGRAM FOR A SYSTEM AND/OR EQUIPMENT IN ACCORDANCE WITH AR 700-127. THE KEY ACTION (OUTPUT) REQUIRED OF THIS EXTERNAL ENTITY IS THE DIRECTIVE, AUTHORITY, OR OTHER DOCUMENTATION THAT INITIATES THE REQUIREMENT FOR THE APPLICATION OF THIS ILS ASSESSMENT TO A SPECIFIC SYSTEM/EQUIPMENT DEVELOPMENT PROGRAM AT A SPECIFIED POINT IN ITS LIFE CYCLE.

ANNEX C

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LSA SUBTASK 301.2.4.3
OPERATIONS AND OTHER SUPPORT FUNCTIONS

ANNEX C

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LSA SUBTASK 301.2.4.3
OPERATIONS AND OTHER SUPPORT FUNCTIONS

ANNEX C

LSA SUBTASK 301.2.4.3
OPERATIONS AND OTHER SUPPORT TASKS NOT IDENTIFIED BY THE FMECA OR RCM ANALYSIS

PROCESS 301.2.4.3.1 - IDENTIFY OTHER OPERATION & SUPPORT FUNCTIONAL REQUIREMENTS

PURPOSE:

Identify the operations, maintenance and support tasks that must be accomplished for the system/equipment to perform its intended missions (see LSA Task 301.2.4). All functional and support requirements not previously determined by FMECA or RCM analysis must be identified (see LSA Task 301.2.4.3). Obtain the following documents and requirements to perform this analysis:

a. Pertinent technical files (i.e., supply support, operations, training, maintenance etc.)
b. LSA
c. FMECA
d. RCM
e. O&O Plan
f. ROC
g. Function requirements
h. Logistic resources data
i. Design characteristics and requirements.

REFERENCE:

MIL-STD-1388-1A

PROCESS 301.2.4.3.1A1 - Identify Mission Functional and Operational Requirements

PURPOSE:

To identify data sources for determining operation and maintenance functions that were not previously identified for the item under analysis.

IDENTIFY MAINTENANCE & OPERATIONAL FUNCTIONS
(PROCESS 301.2.4.3.1A1)

END ITEM NAME:
NOMENCLATURE:
PART NUMBER:

MAINTENANCE/SUPPORT:

a.
b.
c.
d.

OPERATIONAL/MISSION:

a.
b.
c.
d.

PROCEDURES:

1. Review the design file drawings, specifications, Quality Assurance Procedures (QAPs) and any updates to this documentation affecting operation or maintenance functions of the item being analyzed. Identify and document any operation or maintenance functional requirement not identified in the FMECA or RCM analysis. These requirements may arise due to turnaround time limitations and/or system transportability requirements.

2. Identify and document operational mission requirements (such as set-up/tear down, pre/post inspections, interface requirements with other system, connection of antenna, ladders, environmental protective equipment, etc.) as operational tasks.

3. If troubleshooting of cables and connections between systems (e.g., communications trailer and generator) have not be specified, identify those maintenance requirements.

4. Review the Baseline Comparative System Data for characteristics that would apply to the item under analysis, (i.e., supportability-related parameters, targets for improvement; readiness, manpower and personnel requirements, etc.). Compare the baseline logistics resource/requirements data to the known logistics resources/requirements and identify/document those operations and support requirements where no improvement is shown or where targeted improvement have not been made.

REFERENCE:

MIL-STD-1388-1A, Task 203, Comparative Analysis.

PROCESS 301.2.4.3.1A2 - <u>Assess Design Characteristics</u>

PURPOSE:

To review and assess all design areas for useful data pertaining to MANPRINT, safety, state-of-the-art design concepts, RAM, program interfaces, economics analysis. This data is used to assist in the development of the functional and support requirements for the item under analysis.

IDENTIFY DESIGN-RELATED FUNCTIONS
(PROCESS 301.2.4.3.1A2)

END ITEM NAME:
NOMENCLATURE:
PART NUMBER:

DESIGN-RELATED FUNCTIONAL AND OPERATIONAL REQUIREMENTS:

a.
b
c.
d.
e.

PROCEDURES:

1. Assess MANPRINT data to identify and document operational tasks that the operator needs to perform in an NBC/Hazardous environment.

2. Assess safety data to determine operational tasks that must be performed prior to operating or maintaining the system. Identify and document these tasks, (e.g., use of noise reduction equipment).

3. Assess the design to determine any tasks that have to be performed to "turn-on", "start-up" or "power-up" the system.

4. Based on your design assessment, document any task that have to be performed while operating the system. (Include monitoring tasks, setting switches and knobs, software interactions etc.).

PROCESS 301.2.4.3.1A3 - <u>Identify Supply/Support Functional Requirements</u>

PURPOSE:

To identify the supply/support tasks that must be accomplished for the system/equipment to perform its mission in an intended environment.

PROCEDURES:

1. Identify and document any support services that must be performed for the system to perform is mission within its environment.

   These functions include:

   a. Cleaning
   b. Preservation
   c. Loading/Unloading
   d. POL servicing (fueling)
   e. Cryogenics servicing
   f. Towing/Recover
   g. Tie-down/Carry procedures
   h. Hitching/trailering procedures
   i. Camouflaging procedures.

2. Identify and document other servicing requirements that may either be operation or maintenance tasks.

CONSOLIDATE, OPERATIONAL AND SUPPORT FUNCTIONAL REQUIREMENTS (PROCESS 301.2.4.3.1A3)

END ITEM NAME:
NOMENCLATURE:
PART NUMBER:

OTHERS FUNCTIONS

1.
2.
3.
4.

Notes on functional requirements:

These requirements include:

a. Corrosion control
b. Housekeeping
c. Training device support
d. TMDE support
e. Special inspections (e.g., battle damage, accident, and incident)
f. Calibration and bore-sighting
g. Reconfigure system for new mission.

3. Identify and document supply requirements such as:

a. Hand bill/receipt preparation
b. Stock/inventory control
c. Salvage
d. POL delivery/storage
e. Hardware required for mission changes
f. Special handling procedures for hazardous materials.

PROCESS 301.2.4.3.1A4 - Consolidate Operational and Support Functional Requirements

PURPOSE:

Review all identified Functional and Support requirements in the three groups operations, maintenance and supply functions.

PROCEDURES:

1. Ensure that no duplicate requirements have been listed in different areas.

2. Document other functions or requirements that do not fit into a category previously defined.

3. Include any notes or comments on the functional requirement for the system/equipment.

PROCESS 301.2.4.3.2 - Develop Mission Operation Tasks

Purpose:

Develop missions/operations tasks from the Mission-Related Functional Requirements identified in Task 301.2.4.3.1; determine a general task description. Consider the information listed below for the Task Description.

When developing a general task description keep in mind the following points:

a. Operational Functions from Process 301.2.4.3.1.
b. Operational Environment from Subtask 301.2.1.
c. An interval of time (calendar or operational) to perform this task.
d. The appropriate level of maintenance at which this task is to be performed.
e. The impact of performing this task on the readiness of the system or unit.
f. The frequency of the task. (This data will have to be derived from the Reliability analysis of the Unit/System. It should be the same for the item under analysis.)
g. Any special requirements for the performance of the task (facilities, training equipment, tool/support equipment).
h. How the requirement is detected - if it is based on degradation of performance, System/Unit integrity, or other methods.
i. Any potential hazards associated with the performance of this task.
j. Whether or not the task is a hardness-critical procedure.
k. Whether or not the task development process is an addition (new task) or a change.
l. Is a Skill Specialty Code (SSC) available to perform the task?

References:

1. MIL-STD-1388-2A, App. F, DED 469 (Task Criticality)
2. MIL-STD-1388-2A, ILS Program Requirements

PROCESS 301.2.4.3.2A1 - <u>Evaluate Functions for Appropriate Tasks</u>

Purpose:

Evaluate each mission functional/operational requirement identified in Task 301 to identify the appropriate task or set of tasks to satisfy the requirement.

Procedures:

1. Review and evaluate identified mission operational/ functional requirements as developed in Task 301.2.4.3.1.

2. Review the operational environment intended for each operational requirement.

3. List the appropriate task or set of tasks on LSAR Record C, Card 6, Block 6 and Record D, Card 1, Block 5 for each identified operational requirement.

Reference:

MIL-STD-1388-1, Task 301 Functional Requirement Identification.

PROCESS 301.2.4.3.2A2 - Determine Task Description

Purpose:

Determine the General Task Description of the task being developed to satisfy the requirement under analysis.

Procedures:

1. Evaluate results of functional requirement from Task 301.2.4.3.2A1 for use in the preparation of the general task description .

2. Prepare/document the general task description for all operations.

References:

PROCESS 301.2.4.3.2A3 - Develop Task Codes

Purpose:

Develop a unique identifying Task Code to differentiate between each required task. Determine the particular service that will have jurisdiction over the task or management responsibility for the acquisition. Determine the impact on the System/Unit and select a sequence code to differentiate between duplicate tasks for operations and all related tasks.

Reference:

MIl-STD-1388-2A, App. F, DED 467A through F.

PROCESS 301.2.4.3.2A3B1 - Determine Specific Action to be Taken

Purpose:

Determine the action to be taken for the item under analysis by comparing the general task description prepared in Process 301.2.4.3.2A2 with the requirements listed in MIL-STD-1388-2A App F.

Procedures:

1. Compare the general task description developed in Process 301.2.4.3.2A2 with the components that comprise a task code in MIL-STD-1388-2A App F and the method for developing a task code established by the LSART.

2. Determine the specific action to resolve any discrepancies that result from comparing the general task description with the MIL-STD. The general task description may not specify individual tasks, the task interval, or other relevant information.

Reference:

MIL-STD-1388-2A, Appendix F

PROCESS 301.2.4.3.2A3B2 - Assign Task Function

Purpose:

Assign an associated Task Function Code from the MIL-STD when for the identified task(s).

Procedures:

1. For each task identified on Record C, Card 6, Block 6, review Appendix F, DED 467a and select the task function code that best fits the identified task.

2. Indicate the task function code on Record C, Card 6, Block 3a.

Reference:

MIL-STD-1388-2A, Appendix F, DED 467A.

PROCESS 301.2.4.3.2A3B3 - Determine Task Interval

Purpose:

Assign the task interval based on the system/equipment operational requirements. Tasks performed prior to each use are scheduled; while tasks that occur based on different operational conditions are unscheduled.

Procedures:

1. Based on the identified task on Record C, select the task interval code (DED 467b) that best fits the type of task identified. For example, those tasks that must be performed prior to each operation of the system would be Preparative while those performed during operations would be classified as Normal.

2. Indicate the task interval code on Record C, Card 6, Block 3b.

Reference:

MIL-STD-1388-2A, Appendix F.

PROCESS 301.2.4.3.2A3B4 - Determine Operational/Maintenance Level

Purpose:

Determine the level of maintenance/operational activity authorized to perform the task under development by reviewing the maintenance concept and using MIL-STD-1388-2A, Appendix F DED 467c.

Procedures:

1. Review either Item Function Record B, Card B8, Block 4 or the Maintenance Concept Record B, Card B10, Block 4 to identify the operational or maintenance activity responsible for performing the task.

2. Review MIL-STD-1388-2A, Appendix F, DED 467c and determine what level is appropriate for performing the tasks based on the results of procedure 1 above.

3. Assign appropriate operational maintenance level codes to Record C, Card 6, Block 3c.

Reference:

MIL-STD-1388-2A, Appendix F, DED 467.

PROCESS 301.2.4.3.2A3B5 - Determine Service Designator Code

Purpose:

Assign the military service or non-military, major government agency which has jurisdiction or management responsibility.

Procedures:

1. Review the six codes supplied in Appendix F of MIL-STD-1388-2A.

2. Assign the appropriate Service Designator Code to Record C, Card 6, Block 3d.

Reference:

MIL-STD-1388-2A, Appendix F.

PROCESS 301.2.4.3.2A3B6 - Determine Operability Code

PURPOSE:

To determine the impact on the system/equipment readiness by performance of the specific task and assign an operability code in accordance with MIL-STD-1388-2A Appendix F, DED 467e.

Procedures:

1. Determine the impact on the System/Equipment Operability by performing the identified task.

2. Review the operability codes (DED 467e) and select the one that best fits the task. For normal operational tasks, select full mission capable.

3. Assign an Operability Code to the task and place it on Record C, Card 6, Block 3e.

Reference:

MIL-STD-1388-2A, Appendix F.

PROCESS 301.2.4.3.2A3B7 - Assign Task Code Sequence

Purpose:

Assign a two-position sequence code to each task. The assignment policy is in DED 467, App. F, MIL-STD-1388-2A.

Procedures:

1. Assign a two-position sequence code to each task as required.

2. Enter assigned codes in LSAR Record C, Card 6, Block 3e.

Reference:

MIL-STD-1388-2A, DED 467, Appendix F.

PROCESS 301.2.4.3.2A4 - Determine Task Frequency

Purpose:

Determine the frequency of performance or occurrence of the task identified by the Task Code and expressed as the number of occurrences per year for corrective tasks.

Procedures:

1. Review task description Process 301.2.4.3.2A2 and determine if task is corrective (i.e., repairable, adjustable or scheduled) or operational.

2. Determine the task frequency using the methods described in Appendix A of MIL-STD-1388-2A for all tasks that are corrective.

3. Utilize Annual Operating Requirements (AOR) from LSAR Record A, Card 06, Block 3, the operating time conversion factor from Record C, Card 03, Block 5; Record B2, Card 16, Block 9 - Failure Mode Ratios; Record B, Card 07, Block 9 - Mean-Time-Between-Maintenance Action-Induced, Record B, Card 07, Block 10 - Mean-Time-Between Maintenance Actions - No Defect, LSAR Record B2, Card 16, Block 10 - Failure Rate, to determine the task frequency.

4. Record the task frequency on Record C, Card 6, Block 4.

PROCESS 301.2.3.4.3.2A5 - Determine Special Requirements

Purpose:

Determine any special requirements for the performance of the task under development. This involves three different areas: (1) Facilities Requirements, (2) Training Equipment Requirements, and (3) Tool/Support Equipment Requirements.

Procedures:

1. Determine facility requirements, considering factors such as air, water, power requirements, heating, cooling, floor space, etc. List the requirements under the facility selected to perform the task i.e.:

   a. New/Modified Facility
   b. Existing Facilities, with additional resources
   c. Adequate Existing Facilities.

   When the facilities requirement is identified, the Task Identification Code is entered in LSAR Record C, Card 6, Block 8a and Record F, Card F2, Blocks 6, 9, and 12.

2. Review existing training equipment to determine the requirements. Availability of equipment is necessary in order to make this determination. If training material is necessary to prepare the operator or maintenance personnel to perform the task, then enter a "Y" into LSAR Record D, Card 06, Block 7I. If not, then an "N" is entered in the same location. Enter the training equipment code into LSAR C, Card 06 Block 8B. Special training equipment and use of existing training equipment information should be in the training plan, or selected by training personnel.

3. Determine tool/support equipment requirements. Review Supply Catalogs, Supply Bulletins, RPSTL, etc., for currently available tools and equipment. Maintenance Allocation Charts on similar system/equipment should also be reviewed, with a knowledge of tools and support equipment required, or check with maintenance engineering. Comparisons of recommended new tools and equipment with existing tools & equipment to perform the tasks are done by maintenance engineering. Enter Tool Support/Equipment requirements on LSAR Record C, Card 06, Block 8.

4. Check MIL-STD-1369, Integrated Logistic Support Program Requirements, Tasks 201, 202, 206, 207, and 208, to assure all requirements are covered for the item under analysis.

Reference:

MIL-STD-1369

PROCESS 301.2.4.3.2A6 - Assess Hazardous Procedure Code

Purpose:

Identify the potential hazards associated with performance of the task under development and determine if the task exposes the operation and maintenance personnel to hazardous conditions. Agreement should be reached by maintenance engineering as to the degree of hazard.

Procedures:

1. Identify the potential hazards associated with performance of the task. An understanding of the proper tools and support equipment is required, as well as a knowledge of the system/equipments operation. The maintenance evaluation/tear down data if available can be utilized for identifying any potential hazards while performing the task.

2. The sequenced Task Code from LSAR Record B, Card 11, Block 5E is required.

3. Develop Hazardous Maintenance Procedure Code and enter into LSAR Record C, Card 06, Block 10.

References:

PROCESS 301.2.4.3.2A7 - Hardness Critical Procedure Assessment

Purpose:

To determine if the task under development is a Hardness-Critical procedure, i.e., resistant to Nuclear, Biological, Chemical (NBC) attack.

Procedures:

1. Specify any requirements for the item under analysis if its survivability is impacted in an NBC hostile environment. Check system/equipment code LSAR B06-10, D07-11 or H01-17 for use on the item under analysis. See Hardness Critical Item MIL-STD-1388-2A Appendix F, DED 152 for codes.

2. Utilized sequenced Task Code and assign Hardness Critical procedure code (DED 153) from App. F of MIL-STD-1388-2A

3. Record code assigned in LSAR Record C, Card 06, Block 11.

References:

1. MIL-STD-1388-2A, Appendix F, DED 152 and 153
2. ARs 70-60, 40-5, & 40-10
3. MIL-STDs 461 & 462

PROCESS 301.2.4.3.2A8 - <u>Develop Detailed Task Description</u>

Purpose:

Define the task under development using previously-identified task requirements. This process represents a compilation of all previous evaluations, assessments, and/or determinations concerning the task under development.

Procedures:

1. Compile all of the task determinations previously made, i.e., Task Interval Code, special requirements, Hazardous Maintenance Procedure Code, Hardness-Critical Procedure Code, Training data, TM Code, etc.

2. Develop a complete sequential task description by establishing a step-by-step procedure for doing the task. Record each step on Record D, Card 02, Block 5.

3. Record Technical Manual Code on Record C, Card 6, Block 12. This code indicates the Technical Manual in which the task instructions are located.

4. Record Mission-Related tasks on LSAR Cards B13, Block 7, B13, Block 8, and Card A10, Block 10, as appropriate.

Reference:

MIL-STD-1388-2A, App. F, DEDs 251, 252, and 253.

PROCESS 301.2.4.3.3 - Develop all Supply/Support & Control Tasks

Purpose:

Develop all Supply/Support, and Control Tasks from a review of the Supply/Support and Control related functional requirements identified in Task 301.2.4.3.1, Maintenance Concept for Supply type data, MIL-STD-1388-2A DED 467, and the policy files for pertinent regulations, etc.

Procedures:

1. Develop all Supply/Support and Control tasks for the item under analysis, considering the following:

    a. A general description of the task functions
    b. Task interval
    c. The appropriate level where the tasks are accomplished
    d. Impact of performing the task on the Unit/System availability
    e. Task Frequency (review Reliability analysis of the Unit/System)
    f. Measurement Base (Operating hours, flight hours, etc.)
    g. Special Requirements (Facilities, Training Equipment, Tools/Support Equipment)
    h. How the requirement is detected
    i. Are there any potential hazards associated with performing the task.
    j. Whether or not the task being developed is a hardness-critical procedure
    k. Use DED 301.2.4.3.4A for detailed description of processes to identify all such tasks.

2. Record Supply Task requirements, Facilities, Support Equipment and Tools on LSAR Records Facilities Record F, Card 2, Blocks 6,9, and 12; Support Equipment and Tools Record C, Card C06, Blocks 3-12.

3. Record Support Task requirements on LSAR Card E02, Block 03; E05, Block 13; E13, Block 3, etc.

4. Record Control TAsk (Production and Product Assurance) requirements on LSAR Card H05, Blocks 4D, 5D and 6D.

Reference:

MIL-STD-1388-2A, Appendix F, DED 467.

PROCESS 301.2.4.3.3A1 - <u>Evaluate Functional Requirements for Appropriate Task</u>

Purpose:

Evaluate each functional/operational requirement to identify the appropriate tasks for Supply/Support and Control requirements not previously covered.

Procedures:

1. Review the Supply/Support and Control-related functional requirements identified in Task 301.2.4.3.1 and the annual operating requirements to develop all Supply/ Support and Control Tasks. Review the Maintenance Operational Concept and Policy files, including, DED 467 of MIL-STD-1388-2A to establish any other requirements for developing the task code, as well as the intended systems operational environments.

2. Evaluate the review results and list the appropriate task or set of tasks for each Supply/Support and Control requirement and Card C06, Block D6 and Card D01, Block 05.

Reference:

PROCESS 301.2.4.3.3A2 - Determine Task Description

Purpose:

Determine the General Task Description for the task being developed to satisfy the requirement under analysis for Supply/ Support and Control.

Procedures:

1. Determine the General Task Description by evaluating the results of the functional requirements for the appropriate task identified in Process 301.2.4.3.3A1 for Supply/Support and Control information.

2. Prepare the General Task Description for Supply/Support and Control for the LSAR file to be entered in Process 301.2.4.3.3A9.

Reference:

PROCESS 301.2.4.3.3A3 - Develop Task Code

Purpose:

Develop a unique identifying Task Code to differentiate between each required task. Determine the particular service having management responsibility for supply activities. Determine the impact of performance of the Task on System/Unit availability. Determine a sequence code to differentiate between duplicate tasks for Supply/Support and Control.

Procedures:

1. For each task recorded on Record C, record the Task Function Code (the code that denotes specific maintenance, operator, or support functions) on Card C06, Block 3a. Additionally, develop the Task Interval Code, to identifying the scheduled or unscheduled timing of the task occurrence on Card C06, Block 3b.

2. Establish the level of maintenance where the Supply/ Support or Control task is to be accomplished on Card C06, Block 3c.

3. Assign the Service Designator Code IAW DED 467d, Appendix F of MIL-STD-1388-2A, on Card C06, Block 3c.

4. Determine if performing the task on the item under analysis has any impact on the System/Unit availability.

5. Develop the Operability Code to indicate the Operational status and Mission Readiness of the item during the maintenance task, using DED 467e, Appendix F of MIL-STD-1388-2A.

6. Establish the two position Sequence Code to differentiate between multiple tasks for each functional requirement of Supply/Support and Control, on Card C06, Block 3f.

Reference:

MIL-STD-1388-2A

PROCESS 301.2.4.3.3A4 - Determine Task Frequency

Purpose:

Determine the frequency of performance or occurrence of the task identified by the Task Code and expressed as the number of occurrences per year.

Procedures:

1. Determine the frequency of performance on the item under analysis for Supply/Support or Control using the Sequenced Task Code and Appendix A of MIL-STD-1388-2A. Also, use the Annual Operating requirement from the LSAR File, Record A, Card 06, Block 3.

2. Record task frequency on LSA Record C, Card 06, Block 4.

Reference:

MIL-STD-1388-2A

PROCESS 301.2.4.3.3A5 - Determine Special Requirements

Purpose:

Determine any special requirements for the performance of the task under development in the areas of Supply/Support and Control. This determination will address three requirement areas: Facilities, Control, and Tool/Support. (Note: Use Sequenced Task Code for the procedures covered below).

Procedures:

1. Establish what type of Facility requirements are needed, (i.e., New/Modified Facility, Existing Facilities with additional resources or Adequate Existing Facilities) to support the item under analysis based on the Supply/Support and Control tasks identified in Process 301.2.4.3.3A1.

2. Identify Support equipment requirements at the facility, such as air, cooling, heating, power, and storage etc. If this is not available, obtain from program planners. When identified, the Task Identification Code will be entered into Record F, Card 02, Blocks 6, 9, and 12.

3. Determine Control requirements including Production Control and Quality Assurance Control, i.e., special control requirements related to Inspection and Processing documentation. LSAR location Record H, Card 05, Blocks 4D, 5D & 6D.

4. Determine tool/support equipment requirements by reviewing existing available tools, gages, and support equipment applicable to the item under analysis. Review applicable Supply Bulletins, Supply Manuals, and TM RPSTLs for available tools. When a tool/support equipment requirement is identified and is not available, contact Maintenance Engineering for a source of this information. All identified Tool/Support equipment requirements will be documented on LSAR location Record E, Card 02, Block 3.

5. Review existing training equipment to determine the requirements. Availability of equipment is necessary in order to make this determination. If training material is necessary to prepare the operator or maintenance personnel to perform the task, then enter a "Y" into LSAR Record D, Card 06, Block 7I. If not, then an "N" is entered in the same location. Enter the training equipment code into LSAR C, Card 06 Block 8B. Special training equipment and use of existing training equipment information should be in the training plan, or selected by training personnel.

Reference:

MIL-STD-1388-2A, Appendix F.

PROCESS 301.2.4.3.3A6 - Determine Means of Detection

Purpose:

Identify the means of detection of the requirement from which the task under development originates as applies to supply (authorized repair parts), support (trouble shooting and test equipment, control product assurance tasks, inspection equipment, and gages etc) Production Control Tasks (inprocess ATE, packaging etc.) for the item under analysis, subsystem, assembly or subassembly to verify its operational state or conditions.

Procedures:

1. Identify the primary and secondary means of detection. A total of six methods can be used in either position. A complete understanding of the system/equipment design is critical to this determination. Use DED 242, Appendix F of MIL-STD-1388-2A and sequenced Task Code developed in Process 301.2.4.3.3A3. Means of Detection Code will be utilized in the detailed task description and documented in LSAR location, Record C, Card 06, Block 9.

Reference:

MIL-STD-1388-2A DED 242.

PROCESS 301.2.4.3.3A7 - Assess Hazardous Procedure Code

Purpose:

Identify the potential Hazards associated with the performance of the Supply/Support and Control Task. Assign the appropriate code for the task.

Procedures:

1. Identify/assess any potential hazards associated with performing the task, (e.g., spilling cleaning fluid on skin). An understanding of the proper tools and support equipment is required, as well as knowledge of the system/equipments operation. This is a code which denotes whether the performance of the action identified by the task code (301.2.4.3.3A3) will expose the assigned personnel for supply, support and control to hazardous conditions.

2. Assign Hazardous Maintenance Procedure Code to the conditions as found in MIL-STD-1388-2A, Appendix F, DED 155, and documented on Record C, Card 06, Block 10.

Reference:

MIL-STD-1388-2A.1

PROCESS 301.2.4.3.3A8 - Hardness-Critical Procedure Assessment

Purpose:

To determine if the task under development is a Hardness-Critical procedure. Hardness protection refers to Nuclear, Biological, Chemical (NBC) protection only.

Procedures:

1. Specify any requirements associated with performing this task in an NBC hostile environment. Determine and assign a single position code indicating whether or not the particular task under analysis has a bearing on an item which is mission critical. Use DED 153, Appendix F of MIL-STD-1388-2A. The codes are Hardness-Critical "Y" and Not Hardness-Critical "N".

2. Document the Hardness-Critical Code assigned on LSAR location, Record C, Card 06, Block 11.

Reference:

MIL-STD-1388-2A

PROCESS 301.2.4.3.3A9 - Develop Detailed Task Description

Purpose:

Completely define the task under development in terms of previously identified task requirements for Supply/Support and Control.

Procedures:

1. Prepare/Develop a narrative sequential task description of the complete effort expended to accomplish a specific task for Supply/Support or Control. This process is a compilation of all previous evaluations/assessments/ determinations concerning the task under development. Use data from Processes 301.2.4.3A4, 3A5, 3A6, 3A7, and 3A8 to develop this narrative.

2. Document/record the completed Detailed Task Description on LSAR location, Record D, Card D02, Block 5. The Technical Manual Code is recorded on Card C06, Block 12, and H15, Block 7.

Reference:

MIL-STD-1388-2A, Appendix F, DED 410.

PROCESS 301.2.4.4 - DEVELOP ALL TRAINING REQUIREMENTS

PURPOSE:

Develop all training requirements based on operations, maintenance, supply, and support tasks identified in Process 301.2.4.3.1. Training requirements are determined based upon the need for a new or modified skill of the operator and/or maintainer. Input should be obtained from system engineering, maintenance engineering, user representative, training personnel, and the ILS Manager.

PROCEDURES:

1. Obtain copies of AR 602-1 and 602-2. Review the sections applicable to the skills of the MOS identified for operation and maintenance of the system under analysis.

2. Review Records C and D1 to identify those operation, maintenance, support and supply tasks requiring additional skills and training. Obtain input from training organization and user representative personnel.

3. With these personnel, determine the new skills required to perform the task and document them on Record G.

4. Based on the new skills required, determine the additional training required so the operators and maintainers develop the required skill. Indicate any training equipment and/or facilities required. Document these results on Record G also.

5. Once the training requirements, tools, equipment, and locations have been establish, complete the appropriate codes on Card D06, Block 7 and Card D07, Block 8. These cards may have been completed previously, during task identification.

6. If training equipment was specified, then complete Records E and E1 to further establish and elaborate on the requirement.

ANNEX D

LSA SUBTASK 301.2.4.3
VERT APPLICATION METHODOLOGY

VERT APPLICATION METHODOLOGY

BACKGROUND:

Venture Evaluation and Review Technique (VERT) was developed as a network analysis technique to facilitate management decision making. It allows a systematic planning and control of programs and enables managers to find solutions to real life managerial problems.

The terms of the APJ contract require the provision of batch files for each of the VERT networks associated with the various Data Flow Diagrams in the APJ 966 projects.

APJ has been successful in adopting a method for the creation of these networks using the existing EXCELERATOR software package and establishing a naming convention compatible with that used in the Data Flow Diagrams. To do this APJ has made use of the PC model of VERT. A Structured Analysis project was used for this purpose. The prototype VERT network structure was made for one top level and one lower level data flow diagram.

The PC model of VERT has certain limitations built into it. To overcome some of these limitations, certain conventions were used to create the input files. To maintain full generality a set of "dummy" default values were established. The model allows the user to alter the default values of time, cost, and performance to satisfy their specific requirements.

METHODOLOGY:

The basic symbols used to structure the network are:

(i) **SQUARES** - to indicate NODES. These are decision points in the project, or points beyond which the project cannot proceed unless certain criteria are met. There are two type of nodes, one which supports input operations and, the second type which supports output operations.

(ii) **LINES** - to indicate ARCS which are activities that have time, cost, and performance criteria associated with them.

In practice, however, both the arcs and nodes are similar, in that both have time, cost, and performance criteria associated with them. The arcs have a primary and a cumulative set of time, cost, and performance criteria whereas the nodes have only a single cumulative set.

(iii) **NAMING CONVENTIONS** - Efforts have been made to keep the naming convention as compatible as possible to the Data Flow Diagrams. The naming convention used is displayed below.

NODES - All nodes are prefixed with the letter **N**. The individual Nodes are identified by a number and a letter. The number refers to the number of the node within the diagram and the letter refers to the diagram number in the project. In the event that a node has been referenced in an earlier diagram they also carry the number of the node in the earlier diagram as a prefix to the individual node number.

N2.4A

N - All nodes are prefixed with the letter **N**
2 - Gives the number of the node it relates to in a higher level diagram or'an earlier data flow diagram within the project. In this case it refers to node **N2** of the top level diagram.
4 - Gives the number of the node it relates to in a higher level diagram or an earlier data flow diagram within the project. In this case it refers to node **N2** of the top level diagram.
A - The nodes in each subsequent explosion are allotted an alphabetical suffix indication the number of the explosion diagram in the particular project. In this case it is the first lower level diagram within the project.

ARCS - All arcs are prefixed with either the letter **C** or **E**. The individual Arcs are identified by two numbers. The first number refers to the number of the arc within the diagram and the second number refers to the number of the diagram within the project. In the event that an arc has been referenced in an earlier diagram they also carry the number of the arc in the earlier diagram as a prefix to the individual arc number. The arcs which are identified by the letter **E** have direct reference to a process in the corresponding data flow diagram and as such are named the same as the process itself.

C - All arcs are prefixed with the letter C. In some cases, however, arcs carry a prefix of E. These particular arcs correspond to a process within the data flow diagram and are thus named the same as the process itself.

3.3- Gives the number of the arc it relates to in a higher level diagram or an earlier data flow diagram within the project. In this case it refers to arc number 3 in lower level diagram #3 within the project.

8.4- Indicates that this particular arc is the #8 arc in the #4 lower level diagram of the project.

BATCH FILES

INPUT FILES - The input file names are given the extension *.IN.

OUTPUT FILES - The simulation output files are given the extension *OU.

PRINT FILES - The print files have been given the extension *.PR.

(This would allow subsequent updates of the input files to be numbered as IN1..., OU1..., PR1... etc.)

DEFAULT SETTINGS:

Control Record:

(i) The output option selected is "O" which provides a detailed listing, and high level of summary information.

(ii) The input record listing option selected is "O" which prints all input records.

(iii) The composite terminal node output option selected is "16" which assumes family mode and intrafamily transfer of histogram data.

(iv) The number of interactions used are "10" in the demonstration model to facilitate operation in the debug mode if required.

(v) The composite node name and the network name are left as blanks.

(vi) In the run identification the name of the corresponding Data Flow Diagram is used as identification for the network description.

Arc Records:

(i) For each of the arcs the following records are provided:

(a) Master Arc Record
(b) Time Distribution Satellite
(c) Cost Distribution Satellite
(d) Performance Distribution Satellite

(ii) The Distribution Satellite Records are created to provide a uniform statistical distribution.

(iii) The default values used for the minimum and maximum in each criteria are:

TIME	10.0	10.0
COST	10.0	100.0
PERFORMANCE	10.0	50.0

Node Records:

(i) Input Logic - The input logic for the nodes are either "**INITIAL**" or "**AND**".

(ii) Output Logic - The output logic has been defaulted to "**AND**" or "**TERMINAL**".

(iii) The output option indicator and the storage option indicator are defaulted to read "0".

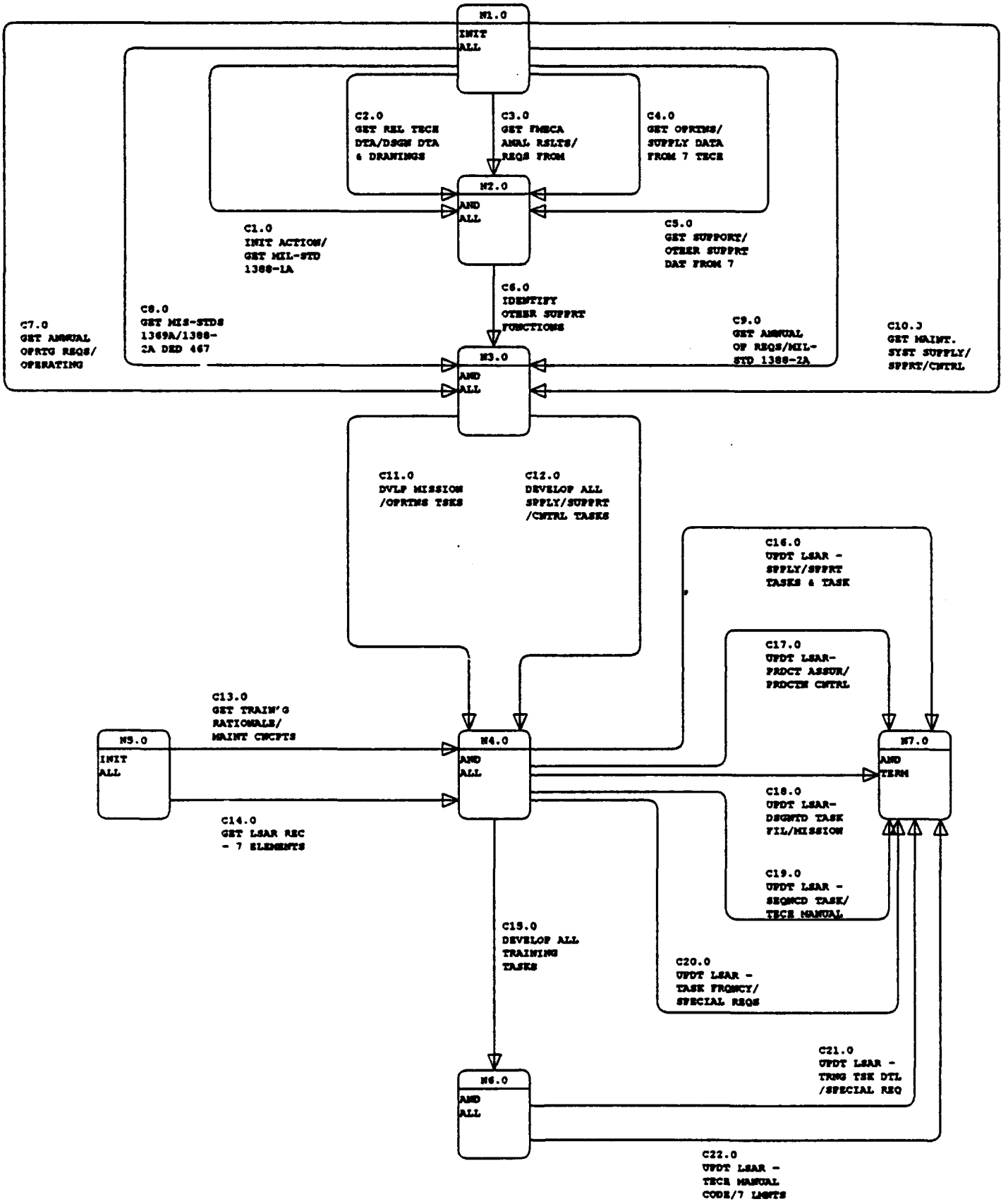
(iv) The node description has also been left blank.

(It is again noted that the user can change the default values to desired values as identified by the particular requirement and applications.)

DOCUMENTATION:

With every project report APJ will be providing the following documents relating to the VERT:

(i) A VERt network diagram corresponding to a particular data flow diagram.
(ii) A print out of the VERT network inputs for the particular data flow diagrams.
(iii) A floppy disc containing the sample input, print and the simulation output files for the default VERT network.



301.2.4.3 VERT OVERVIEW
Created by: jack
Revised by: jack
Date changed: 27-AUG-90

```
 NEW  NETWORK                    PAGE  1
          1         2         3         4         5         6         7         8
12345678901234567890123456789012345678901234567890123456789012345678901234567890
 1. 0016  10                  OPERATIONS & OTHER FUNCTIONAL REQUIREMENTS
           +         +         +         +         +         +         +         +
 2. C1.0   N1.0      N2.0       1.0 INITIATE ACTION & GET MIL-STD 1388-1A, TASK 301
 3. C1.0   DTIME 1             2       10.0       20.0
 4. C1.0   DCOST 1             2       10.0      100.0
 5. C1.0   DPERF 1             2       10.0       50.0
           +         +         +         +         +         +         +         +
 6. C2.0   N1.0      N2.0       1.0 GET REL TECH MAT & DSGN DATA & DRAWINGS
 7. C2.0   DTIME 1             2       10.0       20.0
 8. C2.0   DCOST 1             2       10.0      100.0
 9. C2.0   DPERF 1             2       10.0       50.0
           +         +         +         +         +         +         +         +
10. C3.0   N1.0      N2.0       1.0 GET FMECA ANAL RSLTS/REQS FROM PM/DF
11. C3.0   DTIME 1             2       10.0       20.0
12. C3.0   DCOST 1             2       10.0      100.0
13. C3.0   DPERF 1             2       10.0       50.0
           +         +         +         +         +         +         +         +
14. C4.0   N1.0      N2.0       1.0 GET OPRTNS/SUPPLY DATA FROM 7 TECH FILES
15. C4.0   DTIME 1             2       10.0       20.0
16. C4.0   DCOST 1             2       10.0      100.0
17. C4.0   DPERF 1             2       10.0       50.0
           +         +         +         +         +         +         +         +
18. C5.0   N1.0      N2.0       1.0 GET SUPPORT/OTHER SUPPORT DATA FROM 7 TECH FILES
19. C5.0   DTIME 1             2       10.0       20.0
20. C5.0   DCOST 1             2       10.0      100.0
21. C5.0   DPERF 1             2       10.0       50.0
           +         +         +         +         +         +         +         +
22. C6.0   N1.0      N3.0       1.0 IDENTIFY OTHER SUPPORT FUNCTIONS
23. C6.0   DTIME 1             2       10.0       20.0
24. C6.0   DCOST 1             2       10.0      100.0
25. C6.0   DPERF 1             2       10.0       50.0
           +         +         +         +         +         +         +         +
26. C7.0   N1.0      N3.0       1.0 GET ANNUAL OPERATING REQS/OPERATIONS ENVIRONMENT
27. C7.0   DTIME 1             2       10.0       20.0
28. C7.0   DCOST 1             2       10.0      100.0
29. C7.0   DPERF 1             2       10.0       50.0
           +         +         +         +         +         +         +         +
30. C8.0   N1.0      N3.0       1.0 GET MIL-STDS 1369A/1388-2A DED 467
31. C8.0   DTIME 1             2       10.0       20.0
32. C8.0   DCOST 1             2       10.0      100.0
33. C8.0   DPERF 1             2       10.0       50.0
           +         +         +         +         +         +         +         +
34. C9.0   N1.0      N3.0       1.0 GET ANNUAL OPERATING REQS/MIL-STD 1388-2A
35. C9.0   DTIME 1             2       10.0       20.0
36. C9.0   DCOST 1             2       10.0      100.0
37. C9.0   DPERF 1             2       10.0       50.0
           +         +         +         +         +         +         +         +
38. C10.0  N1.0      N3.0       1.0 GET MAINT CNCPT/SYS SPPLY/SPPRT/CNTRL CNCPTS
39. C10.0  DTIME 1             2       10.0       20.0
40. C10.0  DCOST 1             2       10.0      100.0
41. C10.0  DPERF 1             2       10.0       50.0
           +         +         +         +         +         +         +         +
42. C11.0  N3.0      N4.0       1.0 DEVELOP MISSION/OPERATIONS TASKS
43. C11.0  DTIME 1             2       10.0       20.0
44. C11.0  DCOST 1             2       10.0      100.0
45. C11.0  DPERF 1             2       10.0       50.0
           +         +         +         +         +         +         +         +
```

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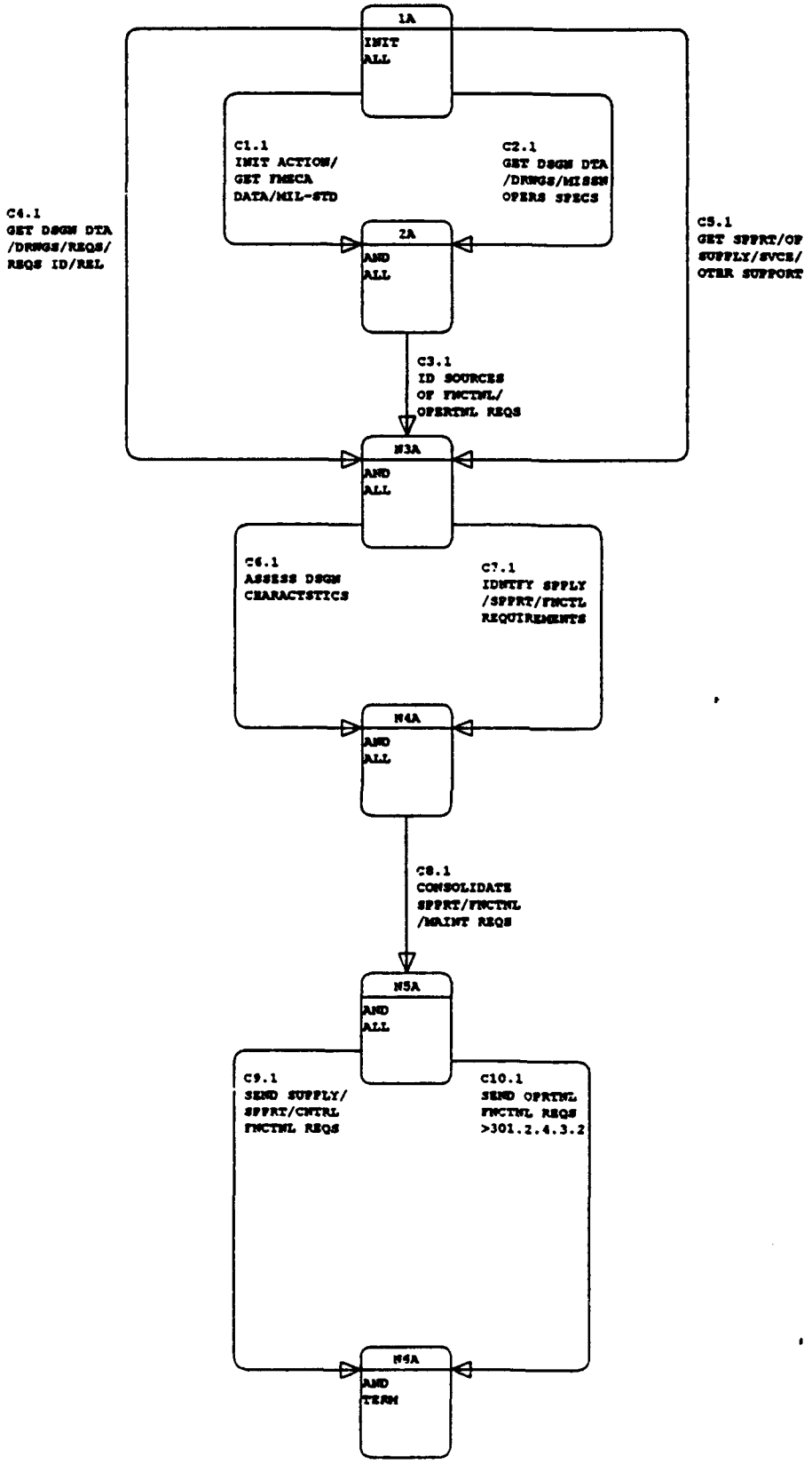
     .    1    2    3    4    5    6    7    8
12345678901234567890123456789012345678901234567890123456789012345678901234567890
  N E W   N E T W O R K              PAGE  2
         1    2    3    4    5    6    7    8
12345678901234567890123456789012345678901234567890123456789012345678901234567890
46. C12.0  N3.0   N4.0    1.0 DEVELOP ALL SPPLY/SPPRT/CNTRL TASKS
47. C12.0  DTIME 1       2     10.0     20.0
48. C12.0  DCOST 1       2     10.0    100.0
49. C12.0  DPERF 1       2     10.0     50.0
           +    +       +     +    +    +    +    +
50. C13.0  N5.0   N4.0    1.0 GET TRAINING RATIONALE/MAINTENANCE CNCPTS
51. C13.0  DTIME 1       2     10.0     20.0
52. C13.0  DCOST 1       2     10.0    100.0
53. C13.0  DPERF 1       2     10.0     50.0
           +    +       +     +    +    +    +    +
54. C14.0  N5.0   N4.0    1.0 GET LSAR RECORDS FOR 7 ELEMENTS
55. C14.0  DTIME 1       2     10.0     20.0
56. C14.0  DCOST 1       2     10.0    100.0
57. C14.0  DPERF 1       2     10.0     50.0
           +    +       +     +    +    +    +    +
58. C15.0  N4.0   N6.0    1.0 DEVELOP ALL TRAINING TASKSS
59. C15.0  DTIME 1       2     10.0     20.0
60. C15.0  DCOST 1       2     10.0    100.0
61. C15.0  DPERF 1       2     10.0     50.0
           +    +       +     +    +    +    +    +
62. C16.0  N4.0   N7.0    1.0 UPDT LSAR-SPPLY/SPPRT TSKS/TASK FRQNCY
63. C16.0  DTIME 1       2     10.0     20.0
64. C16.0  DCOST 1       2     10.0    100.0
65. C16.0  DPERF 1       2     10.0     50.0
           +    +       +     +    +    +    +    +
66. C17.0  N4.0   N7.0    1.0 UPDT LSAR-PRDCT ASSRNCE TSKS/PRDCTN CNTRL
67. C17.0  DTIME 1       2     10.0     20.0
68. C17.0  DCOST 1       2     10.0    100.0
69. C17.0  DPERF 1       2     10.0     50.0
           +    +       +     +    +    +    +    +
70. C18.0  N4.0   N7.0    1.0 UPDT LSAR-DSGNTD TSK FILE/MSSN RLTD TSKS
71. C18.0  DTIME 1       2     10.0     20.0
72. C18.0  DCOST 1       2     10.0    100.0
73. C18.0  DPERF 1       2     10.0     50.0
           +    +       +     +    +    +    +    +
74. C19.0  N4.0   N7.0    1.0 UPDT LSAR-TASK FRQNCY/TECH MANUAL CODE
75. C19.0  DTIME 1       2     10.0     20.0
76. C19.0  DCOST 1       2     10.0    100.0
77. C19.0  DPERF 1       2     10.0     50.0
           +    +       +     +    +    +    +    +
78. C20.0  N4.0   N7.0    1.0 UPDT LSAR-TASK FRQNCY/SPECIAL REQS
79. C20.0  DTIME 1       2     10.0     20.0
80. C20.0  DCOST 1       2     10.0    100.0
81. C20.0  DPERF 1       2     10.0     50.0
           +    +       +     +    +    +    +    +
82. C21.0  N6.0   N7.0    1.0 UPDT LSAR-TRAING TASK DETAIL/SPECIAL REQS
83. C21.0  DTIME 1       2     10.0     20.0
84. C21.0  DCOST 1       2     10.0    100.0
85. C21.0  DPERF 1       2     10.0     50.0
           +    +       +     +    +    +    +    +
86. C22.0  N6.0   N7.0    1.0 UPDT LSAR-TECH MANUAL CODE/7 ELEMENTS DATA
87. C22.0  DTIME 1       2     10.0     20.0
88. C22.0  DCOST 1       2     10.0    100.0
89. C22.0  DPERF 1       2     10.0     50.0
           +    +       +     +    +    +    +    +
```

```
90. ENDARC
          +        +        +        +        +        +        +        +
          1        2        3        4        5        6        7        8
12345678901234567890123456789012345678901234567890123456789012345678901234567890
    N E W   N E T W O R K             PAGE  3
          1        2        3        4        5        6        7        8
12345678901234567890123456789012345678901234567890123456789012345678901234567890
91. N1.0    1  2 0 0
          +        +        +        +        +        +        +        +
92. N2.0    2  2 0 0
          +        +        +        +        +        +        +        +
93. N3.0    2  2 0 0
          +        +        +        +        +        +        +        +
94. N4.0    2  2 0 0
          +        +        +        +        +        +        +        +
95. N5.0    1  2 0 0
          +        +        +        +        +        +        +        +
96. N6.0    2  2 0 0
          +        +        +        +        +        +        +        +
97. N7.0    2  1 0 0
          +        +        +        +        +        +        +        +
98. ENDNODE
          1        2        3        4        5        6        7        8
12345678901234567890123456789012345678901234567890123456789012345678901234567890
```



301.2.4.3.1AV OTHR SUPPORT FNCTS
Created by: jack
Revised by: jack
Date changed: 27-AUG-90

```
     N E W   N E T W O R K                PAGE  1
           1        2        3        4        5        6        7        8
  12345678901234567890123456789012345678901234567890123456789012345678901234567890
 1. 0016  10                REVIEW OTHER SUPPORT FUNCTIONS
           +        +        +        +        +        +        +        +
 2. C1.1   N1A      N2A       1.0 INITIATE ACTION/GET FMECA DATA/MIL STD 1388-1A
 3. C1.1   DTIME 1          2       10.0      20.0
 4. C1.1   DCOST 1          2       10.0     100.0
 5. C1.1   DPERF 1          2       10.0      50.0
           +        +        +        +        +        +        +        +
 6. C2.1   N1A      N2A       1.0 GET DSGN DATA & DRAWINGS & MISSION OPERAT'L SPECS
 7. C2.1   DTIME 1          2       10.0      20.0
 8. C2.1   DCOST 1          2       10.0     100.0
 9. C2.1   DPERF 1          2       10.0      50.0
           +        +        +        +        +        +        +        +
10. C3.1   N2A      N3A       1.0 IDENTIFY SOURCES  OF FUNCTIONAL & OPERATIONAL REQS
11. C3.1   DTIME 1          2       10.0      20.0
12. C3.1   DCOST 1          2       10.0     100.0
13. C3.1   DPERF 1          2       10.0      50.0
           +        +        +        +        +        +        +        +
14. C4.1   N1A      N3A       1.0 GET DSGN DATA/DRWGS/REQS/REQS ID./REL TECH DATA
15. C4.1   DTIME 1          2       10.0      20.0
16. C4.1   DCOST 1          2       10.0     100.0
17. C4.1   DPERF 1          2       10.0      50.0
           +        +        +        +        +        +        +        +
18. C5.1   N1A      N2A       1.0 GET SUPPLY/SUPPORT/OPERATIONAL/SVCE/OTHER SPPRT DOC
19. C5.1   DTIME 1          2       10.0      20.0
20. C5.1   DCOST 1          2       10.0     100.0
21. C5.1   DPERF 1          2       10.0      50.0
           +        +        +        +        +        +        +        +
22. C6.1   N3A      N4A       1.0 ASSESS DESIGN CHARACTERISTICS
23. C6.1   DTIME 1          2       10.0      20.0
24. C6.1   DCOST 1          2       10.0     100.0
25. C6.1   DPERF 1          2       10.0      50.0
           +        +        +        +        +        +        +        +
26. C7.1   N3A      N4A       1.0 IDENTIFY SPPLY/SPPRT/FNCTNL REQUIREMENTS
27. C7.1   DTIME 1          2       10.0      20.0
28. C7.1   DCOST 1          2       10.0     100.0
29. C7.1   DPERF 1          2       10.0      50.0
           +        +        +        +        +        +        +        +
30. C8.1   N4A      N5A       1.0 CONSOLIDATE SPPRT/FNCTNL/MAINT REQS
31. C8.1   DTIME 1          2       10.0      20.0
32. C8.1   DCOST 1          2       10.0     100.0
33. C8.1   DPERF 1          2       10.0      50.0
           +        +        +        +        +        +        +        +
34. C9.1   N5A      N6A       1.0 SEND SPPLY/SPPRT/CNTRL/FNCTNL REQS>301.2.4.3.4
35. C9.1   DTIME 1          2       10.0      20.0
36. C9.1   DCOST 1          2       10.0     100.0
37. C9.1   DPERF 1          2       10.0      50.0
           +        +        +        +        +        +        +        +
38. C10.1  N5A      N6A       1.0 SEND OPERATIONAL FNCTNL REQS ->301.2.4.3.2
39. C10.1  DTIME 1          2       10.0      20.0
40. C10.1  DCOST 1          2       10.0     100.0
41. C10.1  DPERF 1          2       10.0      50.0
           +        +        +        +        +        +        +        +
42. ENDARC
           +        +        +        +        +        +        +        +
43. N1A    1  2 0 0
           +        +        +        +        +        +        +        +
           1        2        3        4        5        6        7        8
```

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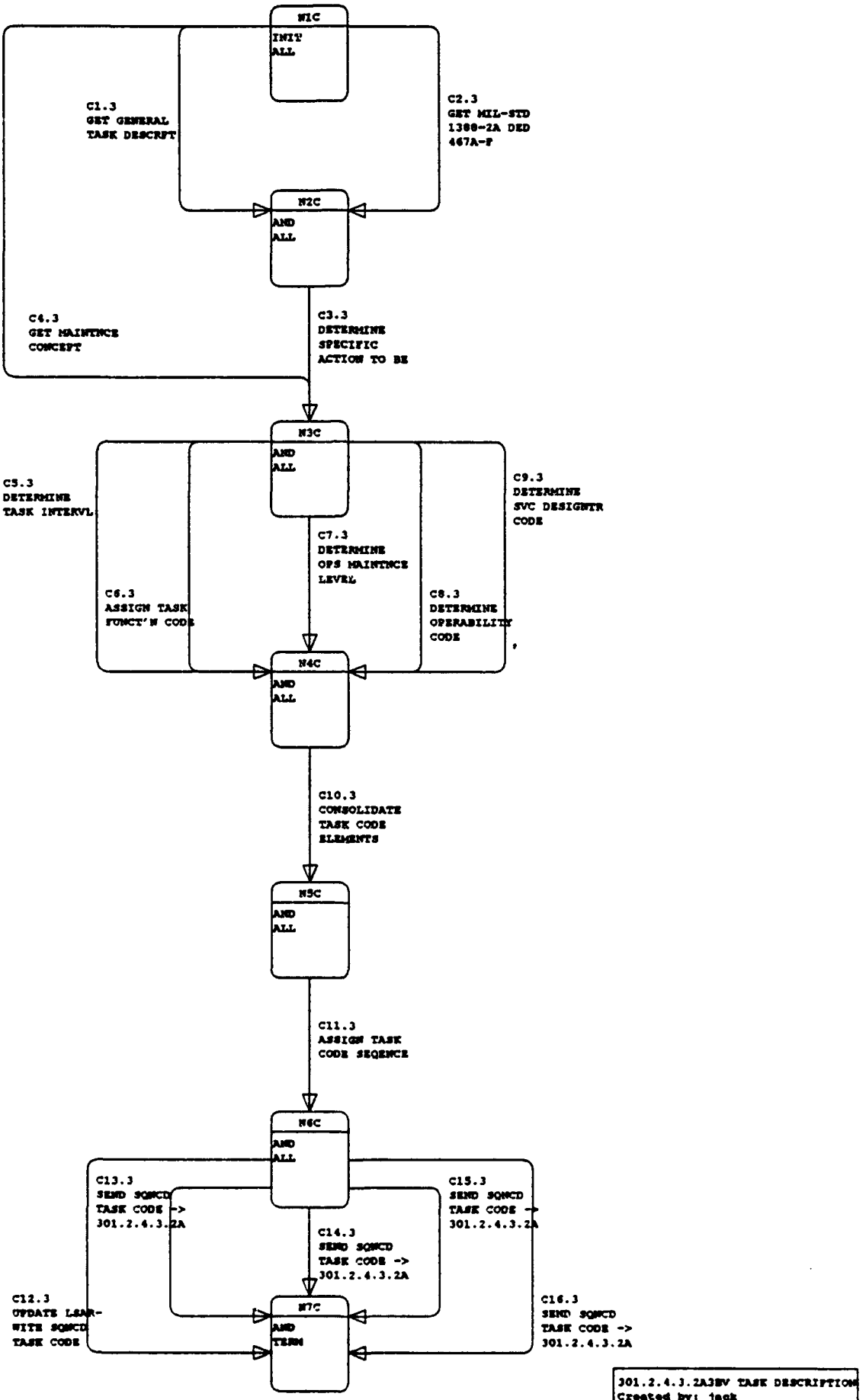
    12345678901234567890123456789012345678901234567890123456789012345678901234567890
      N E W   N E T W O R K                PAGE  2
            1         2         3         4         5         6         7         8
    12345678901234567890123456789012345678901234567890123456789012345678901234567890
44. N2A     2  2 0 0
            +         +         +         +         +         +         +         +
45. N3A     2  2 0 0
            +         +         +         +         +         +         +         +
46. N4A     2  2 0 0
            +         +         +         +         +         +         +         +
47. N5A     2  2 0 0
            +         +         +         +         +         +         +         +
48. N6A     2  1 0 0
            +         +         +         +         +         +         +         +
49. ENDNODE
            1         2         3         4         5         6         7         8
    12345678901234567890123456789012345678901234567890123456789012345678901234567890
```


N1C
INIT
ALL
C1.3
GET GENERAL
TASK DESCRPT
C2.3
GET MIL-STD
1388-2A DED
467A-F
N2C
AND
ALL
C4.3
GET MAINTNCE
CONCEPT
C3.3
DETERMINE
SPECIFIC
ACTION TO BE
N3C
AND
ALL
C5.3
DETERMINE
TASK INTERVL
C9.3
DETERMINE
SVC DESIGNTR
CODE
C7.3
DETERMINE
OPS MAINTNCE
LEVEL
C6.3
ASSIGN TASK
FUNCT'N CODE
C8.3
DETERMINE
OPERABILITY
CODE
N4C
AND
ALL
C10.3
CONSOLIDATE
TASK CODE
ELEMENTS
N5C
AND
ALL
C11.3
ASSIGN TASK
CODE SEQENCE
N6C
AND
ALL
C13.3
SEND SQNCD
TASK CODE ->
301.2.4.3.2A
C15.3
SEND SQNCD
TASK CODE ->
301.2.4.3.2A
C14.3
SEND SQNCD
TASK CODE ->
301.2.4.3.2A
C12.3
UPDATE LSAR-
WITH SQNCD
TASK CODE
N7C
AND
TERM
C16.3
SEND SQNCD
TASK CODE ->
301.2.4.3.2A
301.2.4.3.2A3BV TASK DESCRIPTION
Created by: jack
Revised by: jack
Date changed: 27-AUG-90

```
1'      'N E W   N E T W O R K                    PAGE  1
                1         2         3         4         5         6         7         8
       12345678901234567890123456789012345678901234567890123456789012345678901234567890
    1. 0016  10                  MISSION OPERATIONAL TASKS
                +         +         +         +         +         +         +         +
    2. C1.2    N1B       N2B        1.0 GET OPERAT'G ENVIRONMENT/OPERATION'L FUNCT REQS
    3. C1.2    DTIME 1           2       10.0      20.0
    4. C1.2    DCOST 1           2       10.0     100.0
    5. C1.2    DPERF 1           2       10.0      50.0
                +         +         +         +         +         +         +         +
    6. C2.2    N2B       N3B        1.0 EVALUATE FUNCTIONAL REQUIREMENT FOR APPROPRIATE TSK
    7. C2.2    DTIME 1           2       10.0      20.0
    8. C2.2    DCOST 1           2       10.0     100.0
    9. C2.2    DPERF 1           2       10.0      50.0
                +         +         +         +         +         +         +         +
   10. C3.2    N3B       N4B        1.0 DETERMINE TASK DESCRIPTION
   11. C3.2    DTIME 1           2       10.0      20.0
   12. C3.2    DCOST 1           2       10.0     100.0
   13. C3.2    DPERF 1           2       10.0      50.0
                +         +         +         +         +         +         +         +
   14. C4.2    N1B       N4B        1.0 GET MIL-STD 1388-2A, DED 467
   15. C4.2    DTIME 1           2       10.0      20.0
   16. C4.2    DCOST 1           2       10.0     100.0
   17. C4.2    DPERF 1           2       10.0      50.0
                +         +         +         +         +         +         +         +
   18. C5.2    N1B       N4B        1.0 GET MAINTENANCE CONCEPT
   19. C5.2    DTIME 1           2       10.0      20.0
   20. C5.2    DCOST 1           2       10.0     100.0
   21. C5.2    DPERF 1           2       10.0      50.0
                +         +         +         +         +         +         +         +
   22. C6.2    N4B       N5B        1.0 DEVELOP TASK CODE
   23. C6.2    DTIME 1           2       10.0      20.0
   24. C6.2    DCOST 1           2       10.0     100.0
   25. C6.2    DPERF 1           2       10.0      50.0
                +         +         +         +         +         +         +         +
   26. C7.2    N1B       N5B        1.0 GET ANNUAL OPERATING REQUIREMENT (AOR)
   27. C7.2    DTIME 1           2       10.0      20.0
   28. C7.2    DCOST 1           2       10.0     100.0
   29. C7.2    DPERF 1           2       10.0      50.0
                +         +         +         +         +         +         +         +
   30. C8.2    N1B       N5B        1.0 GET MIL-STD 1369A ILS PROGRAM
   31. C8.2    DTIME 1           2       10.0      20.0
   32. C8.2    DCOST 1           2       10.0     100.0
   33. C8.2    DPERF 1           2       10.0      50.0
                +         +         +         +         +         +         +         +
   34. C9.2    N5B       N6B        1.0 DETERMINE TASK FREQUENCY
   35. C9.2    DTIME 1           2       10.0      20.0
   36. C9.2    DCOST 1           2       10.0     100.0
   37. C9.2    DPERF 1           2       10.0      50.0
                +         +         +         +         +         +         +         +
   38. C10.2   N5B       N6B        1.0 DETERMINE SPECIAL REQUIREMENTS
   39. C10.2   DTIME 1           2       10.0      20.0
   40. C10.2   DCOST 1           2       10.0     100.0
   41. C10.2   DPERF 1           2       10.0      50.0
                +         +         +         +         +         +         +         +
   42. C11.2   N5B       N6B        1.0 ASSESS HAZARDOUS PROCEDURE CODE
   43. C11.2   DTIME 1           2       10.0      20.0
   44. C11.2   DCOST 1           2       10.0     100.0
   45. C11.2   DPERF 1           2       10.0      50.0
                +         +         +         +         +         +         +         +
```

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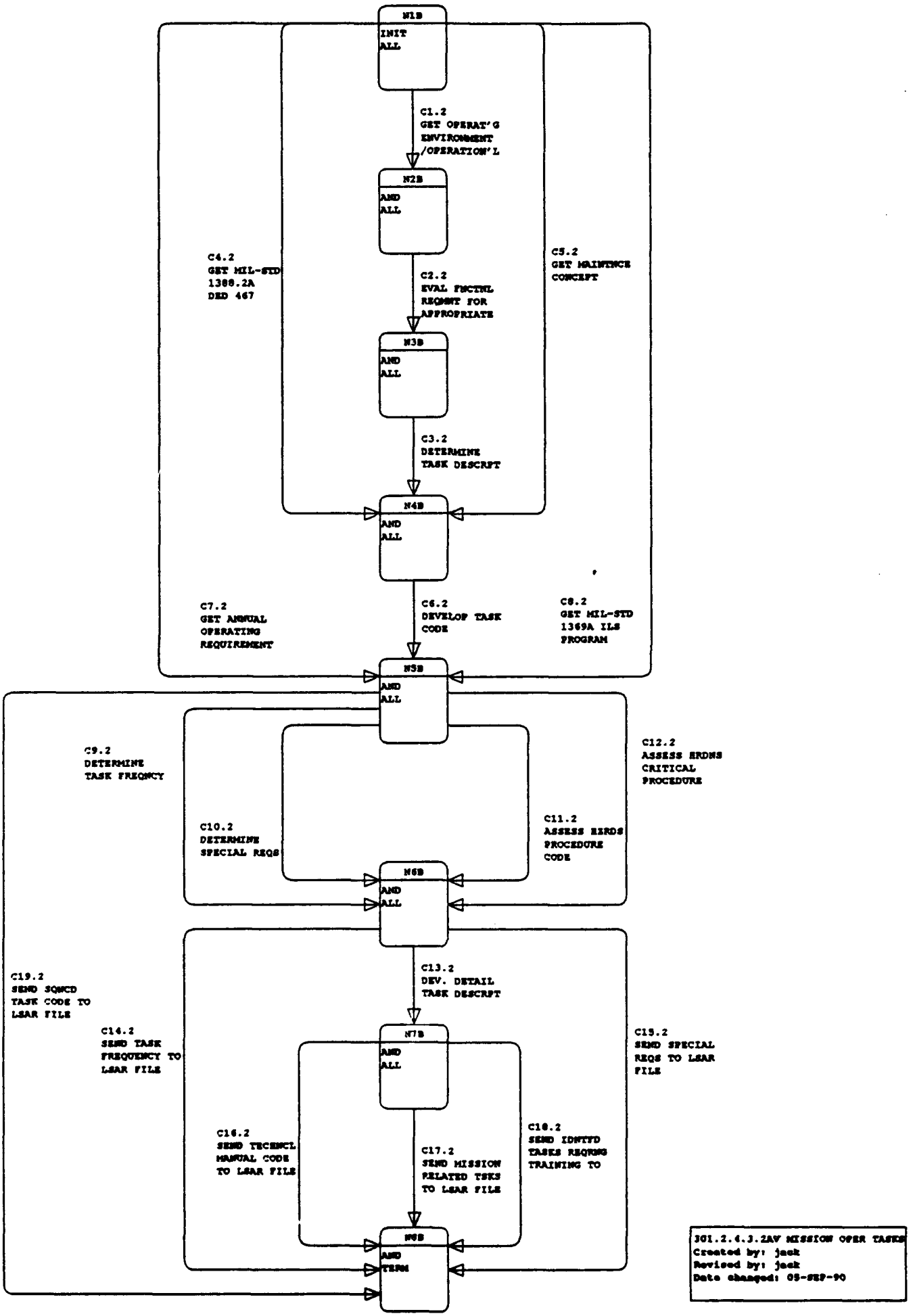
      1       2       3       4       5       6       7       8
12345678901234567890123456789012345678901234567890123456789012345678901234567890
  N E W   N E T W O R K                PAGE  2
      1       2       3       4       5       6       7       8
12345678901234567890123456789012345678901234567890123456789012345678901234567890
46. C12.2   N5B     N6B      1.0 ASSESS HARDNESS CRITICAL PROCEDURE
47. C12.2   DTIME 1       2      10.0      20.0
48. C12.2   DCOST 1       2      10.0     100.0
49. C12.2   DPERF 1       2      10.0      50.0
            +       +       +       +       +       +       +       +
50. C13.2   N6B     N7B      1.0 DEVELOP DETAILED TASK DESCRIPTION
51. C13.2   DTIME 1       2      10.0      20.0
52. C13.2   DCOST 1       2      10.0     100.0
53. C13.2   DPERF 1       2      10.0      50.0
            +       +       +       +       +       +       +       +
54. C14.2   N6B     N8B      1.0 SEND TASK FREQUENCY TO LSAR FOR FILING
55. C14.2   DTIME 1       2      10.0      20.0
56. C14.2   DCOST 1       2      10.0     100.0
57. C14.2   DPERF 1       2      10.0      50.0
            +       +       +       +       +       +       +       +
58. C15.2   N6B     N8B      1.0 SEND SPECIAL REQUIREMENTS TO LSAR FOR FILING
59. C15.2   DTIME 1       2      10.0      20.0
60. C15.2   DCOST 1       2      10.0     100.0
61. C15.2   DPERF 1       2      10.0      50.0
            +       +       +       +       +       +       +       +
62. C16.2   N7B     N8B      1.0 SEND TECHNICAL MANUAL CODE TO LSAR FOR FILING
63. C16.2   DTIME 1       2      10.0      20.0
64. C16.2   DCOST 1       2      10.0     100.0
65. C16.2   DPERF 1       2      10.0      50.0
            +       +       +       +       +       +       +       +
66. C17.2   N7B     N8B      1.0 SEND MISSION RELATED TASKS TO LSAR FOR FILING
67. C17.2   DTIME 1       2      10.0      20.0
68. C17.2   DCOST 1       2      10.0     100.0
69. C17.2   DPERF 1       2      10.0      50.0
            +       +       +       +       +       +       +       +
70. C18.2   N7B     N8B      1.0 SEND IDNTFD TASKS REQUIRING TRNG ->301.2.4.3.4
71. C18.2   DTIME 1       2      10.0      20.0
72. C18.2   DCOST 1       2      10.0     100.0
73. C18.2   DPERF 1       2      10.0      50.0
            +       +       +       +       +       +       +       +
74. C19.2   N5B     N8B      1.0 UPDATE LSAR WITH SEQUENCED TASK CODE
75. C19.2   DTIME 1       2      10.0      20.0
76. C19.2   DCOST 1       2      10.0     100.0
77. C19.2   DPERF 1       2      10.0      50.0
            +       +       +       +       +       +       +       +
78. ENDARC
            +       +       +       +       +       +       +       +
79. N1B     1  2 0 0
            +       +       +       +       +       +       +       +
80. N2B     2  2 0 0
            +       +       +       +       +       +       +       +
81. N3B     2  2 0 0
            +       +       +       +       +       +       +       +
82. N4B     2  2 0 0
            +       +       +       +       +       +       +       +
83. N5B     2  2 0 0
            +       +       +       +       +       +       +       +
84. N6B     2  2 0 0
            +       +       +       +       +       +       +       +
85. N7B     2  2 0 0
```

```
         +       +       +       +       +       +       +       +
         1       2       3       4       5       6       7       8
12345678901234567890123456789012345678901234567890123456789012345678901234567890
1          N E W   N E T W O R K              PAGE  3
         1       2       3       4       5       6       7       8
12345678901234567890123456789012345678901234567890123456789012345678901234567890
86. N8B     2  1 0 0
         +       +       +       +       +       +       +       +
87. ENDNODE
         1       2       3       4       5       6       7       8
12345678901234567890123456789012345678901234567890123456789012345678901234567890
```


N1B
INIT
ALL
C1.2
GET OPERAT'G
ENVIRONMENT
/OPERATION'L
N2B
AND
ALL
C4.2
GET MIL-STD
1388.2A
DED 467
C5.2
GET MAINTNCE
CONCEPT
C2.2
EVAL FNCTNL
REQMNT FOR
APPROPRIATE
N3B
AND
ALL
C3.2
DETERMINE
TASK DESCRPT
N4B
AND
ALL
C7.2
GET ANNUAL
OPERATING
REQUIREMENT
C6.2
DEVELOP TASK
CODE
C8.2
GET MIL-STD
1369A ILS
PROGRAM
N5B
AND
ALL
C9.2
DETERMINE
TASK FREQNCY
C12.2
ASSESS HRDNS
CRITICAL
PROCEDURE
C10.2
DETERMINE
SPECIAL REQS
C11.2
ASSESS HIRDS
PROCEDURE
CODE
N6B
AND
ALL
C13.2
DEV. DETAIL
TASK DESCRPT
C19.2
SEND SQNCD
TASK CODE TO
LSAR FILE
C14.2
SEND TASK
FREQUENCY TO
LSAR FILE
N7B
AND
ALL
C15.2
SEND SPECIAL
REQS TO LSAR
FILE
C16.2
SEND TECHNCL
MANUAL CODE
TO LSAR FILE
C17.2
SEND MISSION
RELATED TSKS
TO LSAR FILE
C18.2
SEND IDNTFD
TASKS REQRNG
TRAINING TO
N8B
AND
TERM
301.2.4.3.2AV MISSION OPER TASKS
Created by: jack
Revised by: jack
Date changed: 05-SEP-90

```
*NEW  NETWORK                    PAGE  1
         1         2         3         4         5         6         7         8
12345678901234567890123456789012345678901234567890123456789012345678901234567890
 1. 0016  10                TASK DESCRIPTIONS
          +    +    +    +    +    +    +    +    +    +
 2. C1.3  N1C  N2C   1.0 GET GENERAL TASK DESCRIPTION
 3. C1.3  DTIME 1    2    10.0   20.0
 4. C1.3  DCOST 1    2    10.0  100.0
 5. C1.3  DPERF 1    2    10.0   50.0
          +    +    +    +    +    +    +    +    +    +
 6. C2.3  N1C  N2C   1.0 GET MIL-STD 1388-2A, DED 467A-F (6 ELEMENTS)
 7. C2.3  DTIME 1    2    10.0   20.0
 8. C2.3  DCOST 1    2    10.0  100.0
 9. C2.3  DPERF 1    2    10.0   50.0
          +    +    +    +    +    +    +    +    +    +
10. C3.3  N2C  N3C   1.0 DETERMINE SPECIFIC ACTIONS TO BE TAKEN
11. C3.3  DTIME 1    2    10.0   20.0
12. C3.3  DCOST 1    2    10.0  100.0
13. C3.3  DPERF 1    2    10.0   50.0
          +    +    +    +    +    +    +    +    +    +
14. C4.3  N1C  N3C   1.0 GET MAINTENANCE CONCEPT
15. C4.3  DTIME 1    2    10.0   20.0
16. C4.3  DCOST 1    2    10.0  100.0
17. C4.3  DPERF 1    2    10.0   50.0
          +    +    +    +    +    +    +    +    +    +
18. C5.3  N3C  N4C   1.0 DETERMINE TASK INTERVAL
19. C5.3  DTIME 1    2    10.0   20.0
20. C5.3  DCOST 1    2    10.0  100.0
21. C5.3  DPERF 1    2    10.0   50.0
          +    +    +    +    +    +    +    +    +    +
22. C6.3  N3C  N4C   1.0 ASSIGN TASK FUNCTION CODE
23. C6.3  DTIME 1    2    10.0   20.0
24. C6.3  DCOST 1    2    10.0  100.0
25. C6.3  DPERF 1    2    10.0   50.0
          +    +    +    +    +    +    +    +    +    +
26. C7.3  N3C  N4C   1.0 DETERMINE OPERATIONS MAINTENANCE LEVEL
27. C7.3  DTIME 1    2    10.0   20.0
28. C7.3  DCOST 1    2    10.0  100.0
29. C7.3  DPERF 1    2    10.0   50.0
          +    +    +    +    +    +    +    +    +    +
30. C8.3  N3C  N4C   1.0 DETERMINE OPERABILITY CODES
31. C8.3  DTIME 1    2    10.0   20.0
32. C8.3  DCOST 1    2    10.0  100.0
33. C8.3  DPERF 1    2    10.0   50.0
          +    +    +    +    +    +    +    +    +    +
34. C9.3  N3C  N4C   1.0 DETERMINE SERVICE DESIGNATOR CODES
35. C9.3  DTIME 1    2    10.0   20.0
36. C9.3  DCOST 1    2    10.0  100.0
37. C9.3  DPERF 1    2    10.0   50.0
          +    +    +    +    +    +    +    +    +    +
38. C10.3 N4C  N5C   1.0 CONSOLIDATE TASK CODE ELEMENTS
39. C10.3 DTIME 1    2    10.0   20.0
40. C10.3 DCOST 1    2    10.0  100.0
41. C10.3 DPERF 1    2    10.0   50.0
          +    +    +    +    +    +    +    +    +    +
42. C11.3 N5C  N6C   1.0 ASSIGN TASK CODE SEQUENCE
43. C11.3 DTIME 1    2    10.0   20.0
44. C11.3 DCOST 1    2    10.0  100.0
45. C11.3 DPERF 1    2    10.0   50.0
          +    +    +    +    +    +    +    +    +    +
```

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     *       1         2         3         4         5         6         7         8
    12345678901234567890123456789012345678901234567890123456789012345678901234567890
      N E W   N E T W O R K                PAGE  2
            1         2         3         4         5         6         7         8
    12345678901234567890123456789012345678901234567890123456789012345678901234567890
46. C12.3   N6C     N7C      1.0 UPDATE LSAR WITH SEQUENCED TASK CODE
47. C12.3   DTIME 1          2       10.0      20.0
48. C12.3   DCOST 1          2       10.0     100.0
49. C12.3   DPERF 1          2       10.0      50.0
             +         +         +         +         +         +         +         +
50. C13.3   N6C     N7C      1.0 SEND SQNCD TASK CODE -> 301.2.4.3.2A4
51. C13.3   DTIME 1          2       10.0      20.0
52. C13.3   DCOST 1          2       10.0     100.0
53. C13.3   DPERF 1          2       10.0      50.0
             +         +         +         +         +         +         +         +
54. C14.3   N6C     N7C      1.0 SEND SQNCD TASK CODE -> 301.2.4.3.2A5
55. C14.3   DTIME 1          2       10.0      20.0
56. C14.3   DCOST 1          2       10.0     100.0
57. C14.3   DPERF 1          2       10.0      50.0
             +         +         +         +         +         +         +         +
58. C15.3   N6C     N7C      1.0 SEND SQNCD TASK CODE -> 301.2.4.3.2A6
59. C15.3   DTIME 1          2       10.0      20.0
60. C15.3   DCOST 1          2       10.0     100.0
61. C15.3   DPERF 1          2       10.0      50.0
             +         +         +         +         +         +         +         +
62. C16.3   N6C     N7C      1.0 SEND SQNCD TASK CODE -> 301.2.4.3.2A7
63. C16.3   DTIME 1          2       10.0      20.0
64. C16.3   DCOST 1          2       10.0     100.0
65. C16.3   DPERF 1          2       10.0      50.0
             +         +         +         +         +         +         +         +
66. ENDARC
             +         +         +         +         +         +         +         +
67. N1C     1  2 0 0
             +         +         +         +         +         +         +         +
68. N2C     2  2 0 0
             +         +         +         +         +         +         +         +
69. N3C     2  2 0 0
             +         +         +         +         +         +         +         +
70. N4C     2  2 0 0
             +         +         +         +         +         +         +         +
71. N5C     2  2 0 0
             +         +         +         +         +         +         +         +
72. N6C     2  2 0 0
             +         +         +         +         +         +         +         +
73. N7C     2  1 0 0
             +         +         +         +         +         +         +         +
74. ENDNODE
            1         2         3         4         5         6         7         8
    12345678901234567890123456789012345678901234567890123456789012345678901234567890
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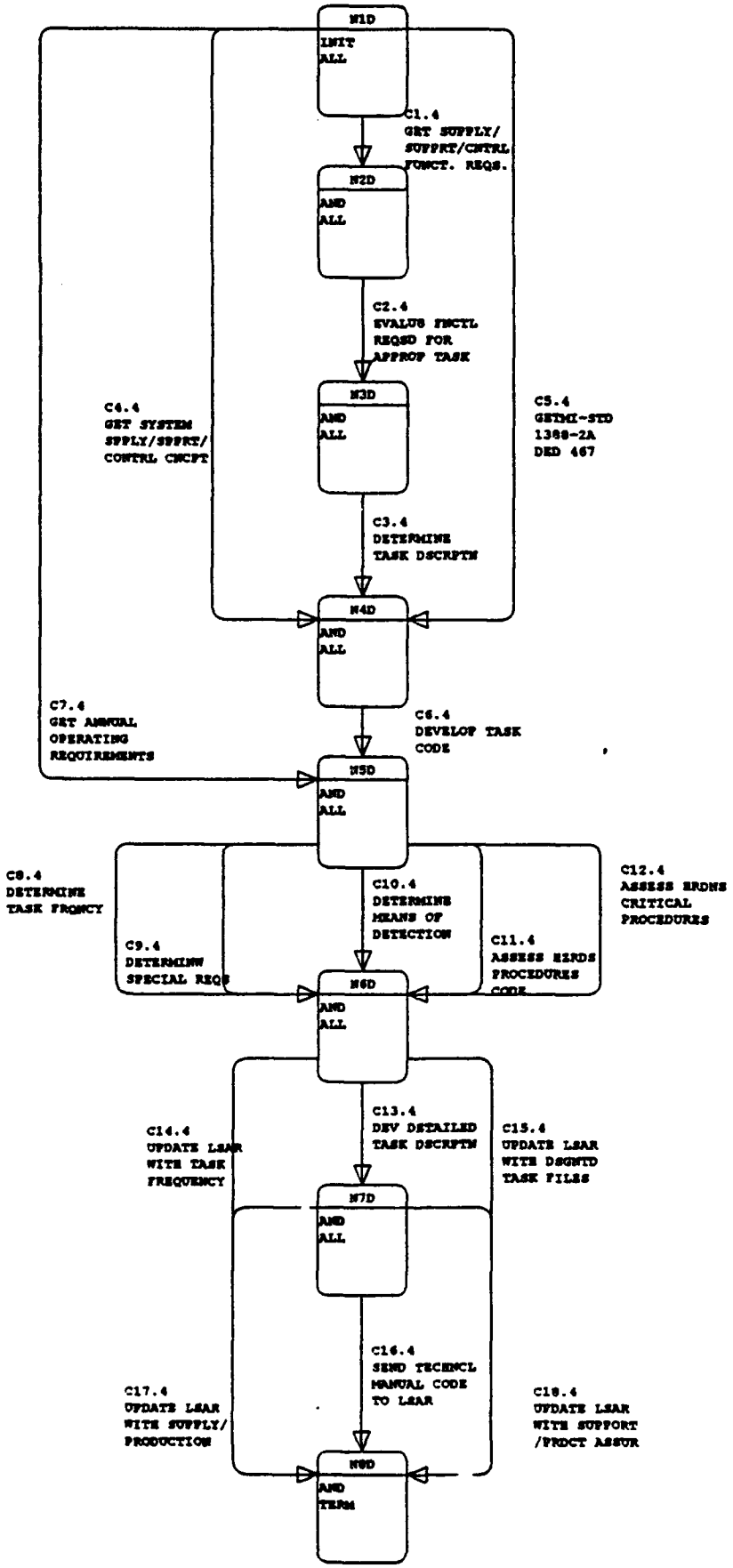

301.2.4.3.3A VERT
Created by: jack
Revised by: jack
Date changed: 28-AUG-90

```
*NEW  NETWORK                    PAGE  1
         1        2        3        4        5        6        7        8
12345678901234567890123456789012345678901234567890123456789012345678901234567890
 1. 0016  10                SUPPORTABILITY TASKS
           +        +        +        +        +        +        +        +
 2. C1.4   N1D      N2D       1.0 GET SUPPLY/SUPPORT/CONTROL FUNCTNL REQS
 3. C1.4   DTIME 1          1       10.0      20.0
 4. C1.4   DCOST 1          2       10.0     100.0
 5. C1.4   DPERF 1          2       10.0      50.0
           +        +        +        +        +        +        +        +
 6. C2.4   N2D      N3D       1.0 EVALUATE FUNCTIONAL REQUIREMNTS FOR APPROPI8 TASKS
 7. C2.4   DTIME 1          2       10.0      20.0
 8. C2.4   DCOST 1          2       10.0     100.0
 9. C2.4   DPERF 1          2       10.0      50.0
           +        +        +        +        +        +        +        +
10. C3.4   N3D      N4D       1.0 DETERMINE TASK DESCRIPTION
11. C3.4   DTIME 1          2       10.0      20.0
12. C3.4   DCOST 1          2       10.0     100.0
13. C3.4   DPERF 1          2       10.0      50.0
           +        +        +        +        +        +        +        +
14. C4.4   N1D      N4D       1.0 GET SYSTEM SUPPLY, SUPPORT & CONTROL CONCEPTS
15. C4.4   DTIME 1          2       10.0      20.0
16. C4.4   DCOST 1          2       10.0     100.0
17. C4.4   DPERF 1          2       10.0      50.0
           +        +        +        +        +        +        +        +
18. C5.4   N1D      N4D       1.0 GET MIL-STD 1388-2A, DED 467 (6 ELEMENTS)
19. C5.4   DTIME 1          2       10.0      20.0
20. C5.4   DCOST 1          2       10.0     100.0
21. C5.4   DPERF 1          2       10.0      50.0
           +        +        +        +        +        +        +        +
22. C6.4   N4D      N5D       1.0 DEVELOP TASK CODE
23. C6.4   DTIME 1          2       10.0      20.0
24. C6.4   DCOST 1          2       10.0     100.0
25. C6.4   DPERF 1          2       10.0      50.0
           +        +        +        +        +        +        +        +
26. C7.4   N1D      N5D       1.0 GET ANNUAL OPERATING REQUIREMENTS (AOR)
27. C7.4   DTIME 1          2       10.0      20.0
28. C7.4   DCOST 1          2       10.0     100.0
29. C7.4   DPERF 1          2       10.0      50.0
           +        +        +        +        +        +        +        +
30. C8.4   N5D      N6D       1.0 DETERMINE TASK FREQUENCY
31. C8.4   DTIME 1          2       10.0      20.0
32. C8.4   DCOST 1          2       10.0     100.0
33. C8.4   DPERF 1          2       10.0      50.0
           +        +        +        +        +        +        +        +
34. C9.4   N5D      N6D       1.0 DETERMINE SPECIAL REQUIREMENTS
35. C9.4   DTIME 1          2       10.0      20.0
36. C9.4   DCOST 1          2       10.0     100.0
37. C9.4   DPERF 1          2       10.0      50.0
           +        +        +        +        +        +        +        +
38. C10.4  N5D      N6D       1.0 DETERMINE MEANS OF DETECTION
39. C10.4  DTIME 1          2       10.0      20.0
40. C10.4  DCOST 1          2       10.0     100.0
41. C10.4  DPERF 1          2       10.0      50.0
           +        +        +        +        +        +        +        +
42. C11.4  N5D      N6D       1.0 ASSESS HAZARDOUS PROCEDURES CODE
43. C11.4  DTIME 1          2       10.0      20.0
44. C11.4  DCOST 1          2       10.0     100.0
45. C11.4  DPERF 1          2       10.0      50.0
           +        +        +        +        +        +        +        +
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     *    1        2        3        4        5        6        7        8
    12345678901234567890123456789012345678901234567890123456789012345678901234567890
      N E W   N E T W O R K                PAGE  2
            1        2        3        4        5        6        7        8
    12345678901234567890123456789012345678901234567890123456789012345678901234567890
 46. C12.4   N5D     N6D      1.0 ASSESS HARDNESS CRITICAL PROCEDURES
 47. C12.4   DTIME 1         2      10.0      20.0
 48. C12.4   DCOST 1         2      10.0     100.0
 49. C12.4   DPERF 1         2      10.0      50.0
             +        +        +        +        +        +        +        +
 50. C13.4   N6D     N7D      1.0 DEVELOP DETAILED TASK DESCRIPTION
 51. C13.4   DTIME 1         2      10.0      20.0
 52. C13.4   DCOST 1         2      10.0     100.0
 53. C13.4   DPERF 1         2      10.0      50.0
             +        +        +        +        +        +        +        +
 54. C14.4   N6D     N8D      1.0 UPDATE LSAR WITH TASK FREQUENCY
 55. C14.4   DTIME 1         2      10.0      20.0
 56. C14.4   DCOST 1         2      10.0     100.0
 57. C14.4   DPERF 1         2      10.0      50.0
             +        +        +        +        +        +        +        +
 58. C15.4   N6D     N8D      1.0 UPDATE LSAR WITH DESIGNATED TASK FILES
 59. C15.4   DTIME 1         2      10.0      20.0
 60. C15.4   DCOST 1         2      10.0     100.0
 61. C15.4   DPERF 1         2      10.0      50.0
             +        +        +        +        +        +        +        +
 62. C16.4   N7D     N8D      1.0 SEND TECHNICAL MANUAL CODE TO LSAR FILES
 63. C16.4   DTIME 1         2      10.0      20.0
 64. C16.4   DCOST 1         2      10.0     100.0
 65. C16.4   DPERF 1         2      10.0      50.0
             +        +        +        +        +        +        +        +
 66. C17.4   N6D     N8D      1.0 UPDATE LSAR WITH SUPPLY & PRODUCTION CONTROL TASKS
 67. C17.4   DTIME 1         2      10.0      20.0
 68. C17.4   DCOST 1         2      10.0     100.0
 69. C17.4   DPERF 1         2      10.0      50.0
             +        +        +        +        +        +        +        +
 70. C18.4   N6D     N8D      1.0 UPDATE LSAR WITH SUPPORT & PRODUCT ASSURANCE TASKS
 71. C18.4   DTIME 1         2      10.0      20.0
 72. C18.4   DCOST 1         2      10.0     100.0
 73. C18.4   DPERF 1         2      10.0      50.0
             +        +        +        +        +        +        +        +
 74. ENDARC
             +        +        +        +        +        +        +        +
 75. N1D     1  2 0 0
             +        +        +        +        +        +        +        +
 76. N2D     2  2 0 0
             +        +        +        +        +        +        +        +
 77. N3D     2  2 0 0
             +        +        +        +        +        +        +        +
 78. N4D     2  2 0 0
             +        +        +        +        +        +        +        +
 79. N5D     2  2 0 0
             +        +        +        +        +        +        +        +
 80. N6D     2  2 0 0
             +        +        +        +        +        +        +        +
 81. N7D     2  2 0 0
             +        +        +        +        +        +        +        +
 82. N8D     2  1 0 0
             +        +        +        +        +        +        +        +
 83. ENDNODE
             1        2        3        4        5        6        7        8
```

ANNEX E

STRUCTURED SYSTEMS ANALYSIS
Fundamentals

NOTE: Our presentation of Structured Analysis Fundamented with the associated figure is reproduced verbatim in each report

ANNEX E

STRUCTURED SYSTEMS ANALYSIS
Fundamentals

NOTE: Our presentation of Structured Analysis Fundamented with the associated figure is reproduced verbatim in each report

ANNEX E
STRUCTURED SYSTEMS ANALYSIS

Fundamentals

Structured Systems Analysis (SSA) has recently become an industry standard for generating Data Flow Diagrams (replacing "logic diagrams" or "flow charts") to aid in coordinating the functions to be performed by a computer program and its associated Inputs/Outputs (I/O). During the SSA, each set of "flow charts" can be checked by the potential user to assure that there is complete agreement on what is to be done by the program, and how it is to be accomplished. It also provides considerable flexibility for updating or changing the program.

Six basic elements (see figure 1) are used in SSA:

1. Process (PRC)
2. Data Flow (DAF)
3. Data Store (DAS)
4. External Entity (EXT)
5. Data Flow Diagram (DFD)
6. Data Dictionary (DCT)

PROCESS (Represented by a Circle):

A function or operation to be performed which can be explained by a set of instructions representing a single task, e.g., "calculate interest on a loan", "prepare a draft report". If the Process description is too complex to describe in a few steps, it may be necessary to develop a lower level description (see below).

DATA FLOW (Lines interconnecting Processes or I/Os):

Each function or Process cannot be a stand-alone in a complex network. To have any meaning in a program, each process must be initiated by a previous action and/or provided information on which to act. Furthermore, a Process must result in an output which is the input to the next logical Process. These inputs, outputs, or initiating actions are identified as Data Flows, and are represented by the Data Flow lines indicating its point of origin and the process to which it provides data.

DATA STORE (Represented by two parallel lines):

Although some Processes generate data used as input to a succeeding Process, there is often a need to "gather or collect" information from files in which it is stored. This information may come from an external source (such as a MIL-STD, Army regulation, historical experience files, etc.), or an internal source or file in which data is temporarily stored for use by succeeding processes. These Data Stores can be visualized as a "file cabinet", in which the data are stored for later retrieval).

EXTERNAL ENTITY (Represented by a Rectangle):

Each program or logical process must have an initiating action, a "point" of disposition of the results, and possible input guidance or instructions. Each of these have authorities, functions, or applications which are independent of the program Process (although required by the program Process). Thus, these activities, agencies, or facilities are considered "External Entities" to the program.

DATA FLOW DIAGRAM:

The general arrangement of the above can be readily seen. First, the circle or Process describes what has to be done; the interconnecting lines represent the Data Flows, together with the specific description of all I/Os. The Data Stores identify the source and/or file designation of a data base, and the External Entities represent those activities remote from the Process, which are the source of guidance or the recipients of the program. This combination of Processes, Data Flows, Data Stores, and External Entities constitutes a "Data Flow Diagram". The unique feature of the Data Flow Diagram (DFD) is that each process can be considered independently, permitting a change to be made in one Process without a major change in the overall program.

DATA DICTIONARY:

The Data Dictionary consists of a complete description of each of the basic elements. For the Process, it contains a step-by-step description of what has to be performed. The description of the Data Flow identifies the nomenclature of the data, a detailed description of its content, and its source. The Data Stores and External Entities are described, including possible location.

The Data Dictionary (a living document) begins with a description of the first Process and is continually built-up as the Data Flow Diagrams are expanded, detailed, and eventually completed.

APPROACH TO PERFORMING STRUCTURED SYSTEM ANALYSIS:

The best approach to Structured Systems Analysis is to assume that the program consists of a series of processes, each of which are to be assigned to an inexperienced analyst. Each analyst is to be walked through the assigned process of the Program, explaining step-by-step functions have to be performed or what actions have to be taken to accomplish the process. The analyst is also informed where the information is coming from (input Data Flow), what is to be generated by each process (output Data Flow), where the data base may to be found (Data Stores), and who to contact for guidance (External Entities).

The best way to initiate a SSA is to set down the point of origin of a program, its final goal(s), and the intermediate functions or actions needed to get from beginning to goal. Each step should be considered as a Process - some may be sequential and others parallel. Then, the steps needed to accomplish the Process should be described. If the description is complex and needs intermediate steps, the Process is then a candidate for an "explosion". That is, the top (or upper) level Process is considered as a "project" and its own Data Flow Diagram is prepared.

When writing the step-by-step procedures in the Process, certain elements of data (or information) must be made available for the procedure. Each element of data is considered as an input Data Flow, which is identified and described. The product (or result) of a Process is an output Data Flow element.

Each Data Flow to the Process must originate from:

1. an earlier Process
2. a Data Store (or file)
3. an External Entity.

These sources are also identified, described and put into the Data Dictionary. As soon as the last portion of the Data Flow Diagram has been described, the SSA is complete.

The structured Analysis phase is followed by Structured Design, then by programming and finally software test and validation. The organization of Structured Analysis and its relationship to Structured System Design is shown on Figure 2.

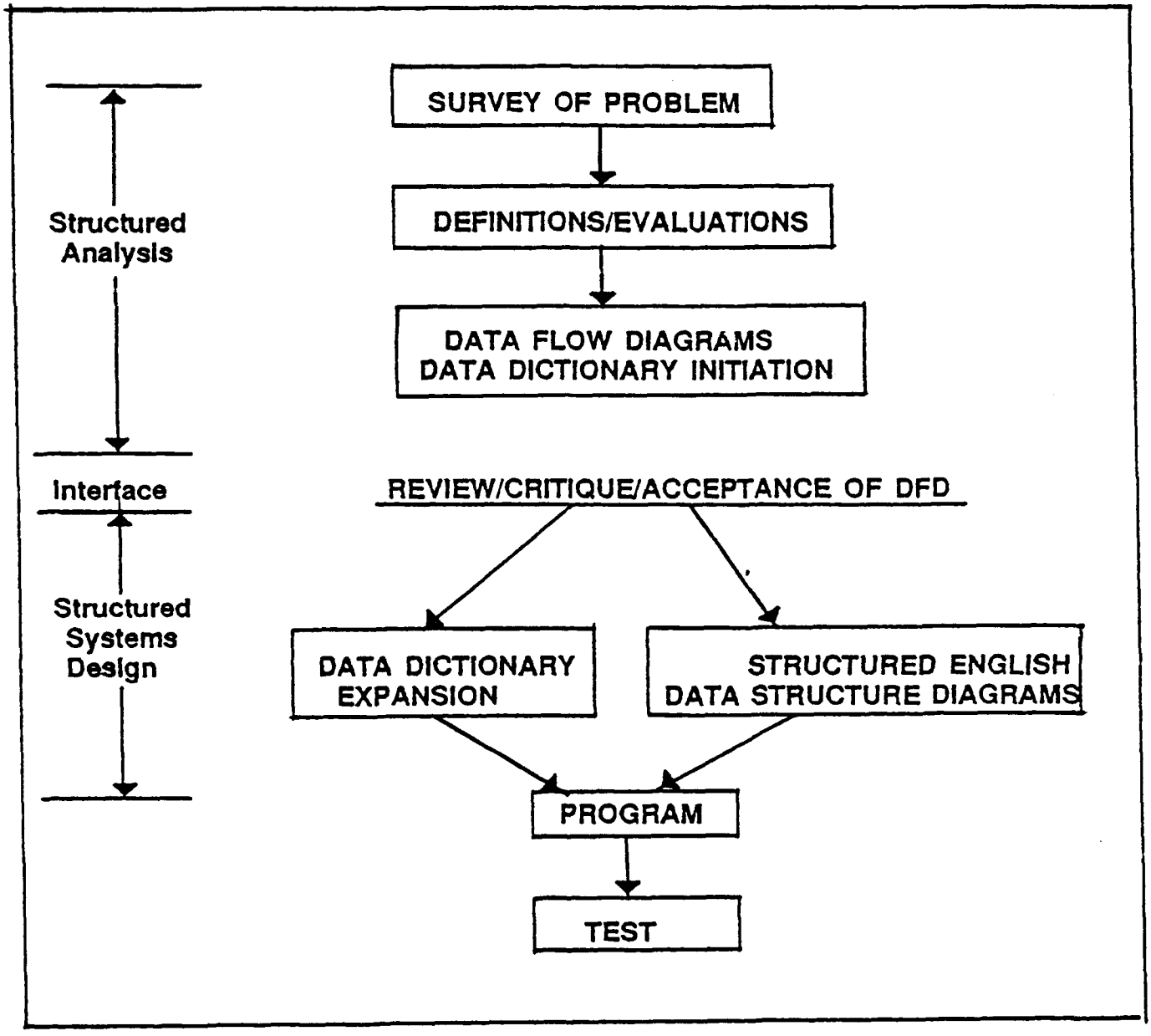

Figure 1. Structured Analysis & Structured Systems Design Organization

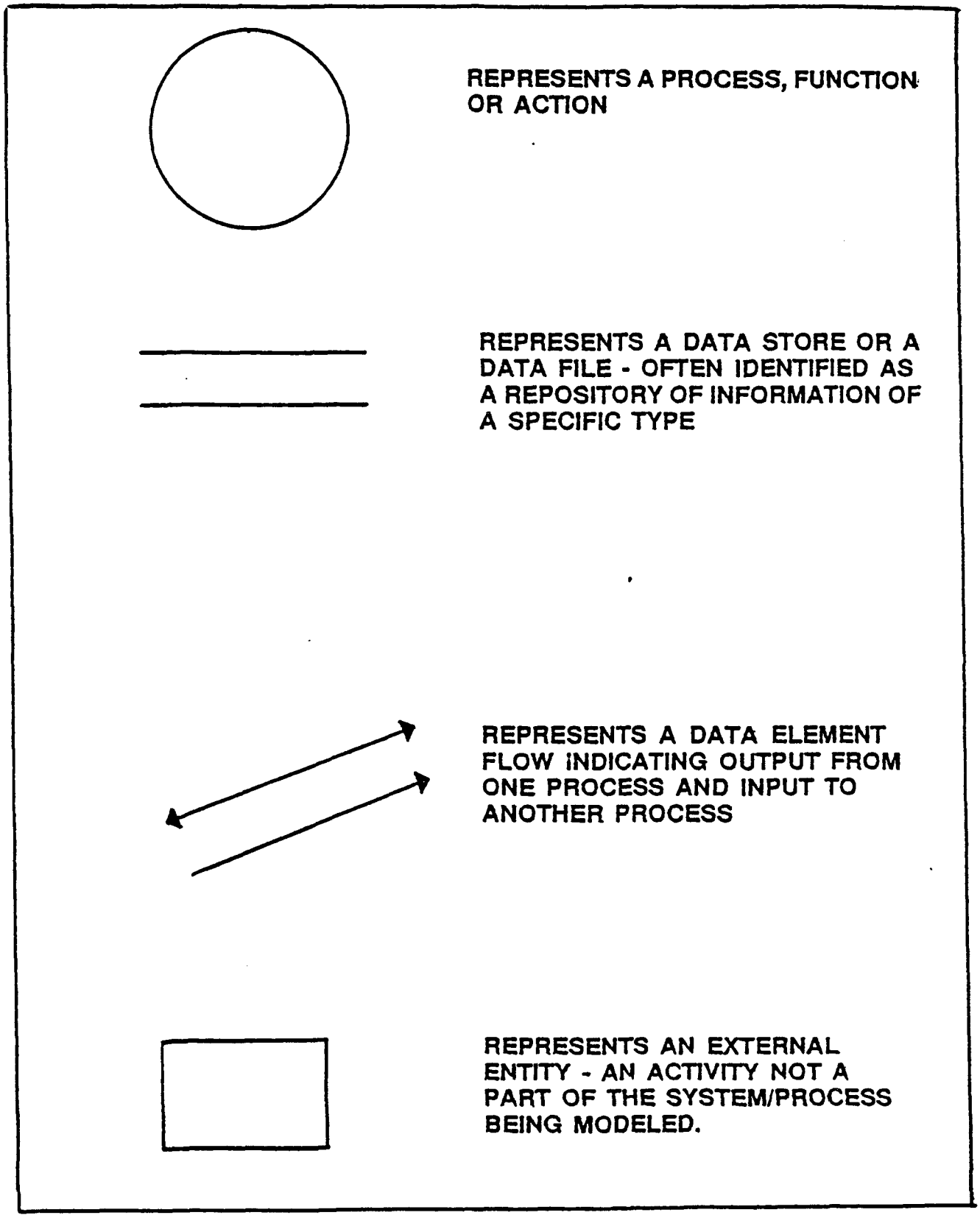

Figure 2. Standard DFD Symbol Definitions